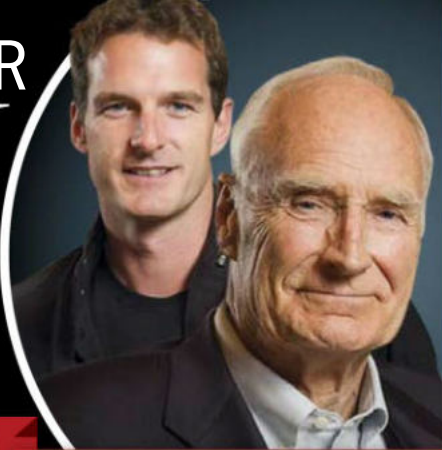


BAE HARRIER GR9: THE RAF'S ICONIC JET FIGHTER

HISTORY of WAR



DAN & PETER
SNOW

ON HOW NAPOLEON
WAS FINALLY DEFEATED

★ BLOW-BY-BLOW OF THE BATTLEFIELD ★ BEHIND WELLINGTON'S TACTICS ★ INSIDE THE BRITISH RANKS

WATERLOO

1815-2015

SYRIAN
CIVIL
WAR

The origins of this
catastrophic conflict

JAPAN
vs
CHINA

The story of WWII's
brutal beginnings

PLUS:

Attack on High Wood ☒
Inside a Vickers ☒
MG 42 vs M2HB ☒

THE BIRTH OF THE
SAS

HOW BRITAIN'S WAR IN THE DESERT FORGED
THE WORLD'S ELITE SPECIAL FORCES

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ISSUE 017

MACHINE GUNS

DELIVERING DEATH AND
DESTRUCTION SINCE 1861

VC HERO OF KOREA

THE MAN WHO TOOK ON THE
CHINESE ARMY AND WON

10
WORST
GENERALS

WHO WERE THE MOST USELESS LEADERS?

EXPLORE » DISCOVER » ENJOY

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NATIONWIDE
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EXHIBITIONS

18 JUNE 1815...

a day that changed lives

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LOTTERY FUNDED

Welcome

“Nothing except a battle lost can be half so melancholy as a battle won”

– Arthur Wellesley, Duke of Wellington

I was first introduced to the Battle of Waterloo years ago by the ever-gallant Richard Sharpe. Among other feats he bravely defended La Haye Sainte, shot the Prince of Orange and, as always, saved the day. Intrigued, I later learned to my dismay that Sean Bean had been nowhere near Belgium or even the century at the time of the battle, but my fascination with Waterloo remained.

This issue of **History of War** hits the shelves on 18 June, 200 years to the day since Wellington, Napoleon and Blücher's almighty clash. It wasn't the biggest, the bloodiest, or even the most crucial battle in the Napoleonic Wars, but it captured the imagination of a

continent emerging from decades of catastrophic warfare. Importantly, it also served as the final fight of Europe's own god of war, Napoleon, and the start of a new era.



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JACK GRIFFITHS

This issue Jack interviewed his historian heroes, father-and-son broadcasting legends Peter and Dan Snow, for our bumper Waterloo feature (page 28). Next, he took to naming and shaming the most incompetent generals ever (page 54).



MIGUEL MIRANDA

Struggling against a searing Philippine summer, Miguel still managed to carve up an engrossing piece on the real beginning of World War II – the Second Sino-Japanese War. A word of warning: this one isn't for the faint-hearted (page 82).



GAVIN MORTIMER

A best-selling writer and authority on British special forces history, Gavin has brought his expertise to issue 17 with a captivating account of the Long Range Desert Group and its work with the fledgling SAS in WWII north Africa (page 46).

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Here, tourists are depicted wandering the site of Waterloo years after the battle





WATERLOO 200

28 Napoleon marches to crush the armies of Europe

Frontline

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The big guns that have dominated battlefields for over a century are laid out in this issue's timeline

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A German MG 42 is pitted against the ever-reliable Browning M2 HB

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Some of the most powerful guns have made their mark on the world and the history of war

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British machine-gun teams take on German trenches in this astonishing WWI encounter

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The story of how one man changed the face of machine guns for good

24 **Anatomy of a Vickers-Maxim**

Peer at the innards of this ground-breaking destructive weapon

26 **Birth of the Gatling**

The curator of firearms at the National Firearms Centre recounts the origin of this iconic weapon

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10 **WORST** GENERALS

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BIRTH OF THE SAS

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Delve into this extended feature on the bicentenary of Europe's iconic clash

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The original special operations against the Nazis in the desert of north Africa

54 10 worst generals

Jack Griffiths names and shames the most inept leaders in military history

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James Carne

One man leads his squad in an against-the-odds story of survival in Korea

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Harrier GR9

Take a tour of Britain's iconic VTOL fighter jet in this issue's Operator's Handbook

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Syrian Civil War

How today's horrific crisis is rooted in colonialism and a clash of cultures

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The disturbing origins of WWII laid bare in this look at the Second Sino-Japanese War

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98 WAR IN NUMBERS

Battle of Waterloo

The stats tell a story of their own in this account of Europe's famous showdown

VC HERO JAMES CARNE

One Brit leads an astounding defence against a horde of enemy troops



WARⁱⁿ FOCUS

A HOWITZER BLAST

Taken 16 July 2006

An Israeli Army M109 Howitzer fires a round off towards Beit Hanoun, in the north of the Gaza Strip. In 2006, shelling operations began against Beit Hanoun as it was believed to be a launching area for Palestinian rocket attacks into Israel. The American-designed M109 is capable of a sustained three rounds per minute, which, combined with a top speed of 35mph, makes it a hugely flexible machine. The gun first emerged during the Vietnam War, replacing the lighter M108 version. It also saw action during the Yom Kippur War against Egypt.





WAR_{in} **FOCUS**

"COME BY, FRITZ"

Taken 8 September 1940

A bemused British farmer continues to herd his sheep around the wreckage of a German plane shot down during a dog fight over his farm. Soldiers and defence volunteers shortly arrived on the scene to take the pilot away, but his wrecked plane remained behind. September 1940 saw the battle in the skies between the RAF and Luftwaffe coming to a head. Just a week after this photograph was taken, the Luftwaffe launched a huge offensive against London, today known as Battle of Britain Day, in a bid to draw the RAF out into a final showdown.





WARⁱⁿ FOCUS

LEST WE FORGET

Taken 10 May 2015

A Red Army veteran takes part in a march in the streets of Jerusalem as part of the 70th anniversary of the Allied victory over Nazi Germany. Joining the march were several Israeli veterans, as well as veterans' family members, who served in various European armies during the war. It's estimated that about 1.5 million Jewish soldiers fought for the USA, Britain and the Soviet Union against the Axis forces. It's been suggested that up until recently Israel has largely overlooked the few surviving veterans of the war, many of who are now living in the country.



WAR_{in} **FOCUS**

NAZI TOUR DE FRANCE

Taken c. 1939

Members of the German light machine-gun Cyclist Corps line up wearing gas masks. Cycling soldiers were widely deployed during the more tactile periods of the Great War, but were still commonly in use during the early years of WWII. German troops notoriously re-entered the Rhineland on bicycles, supposedly to be able to make a quick retreat if France and her allies were to respond aggressively.







HEAVY MACHINE GUNS

Changing the way that nearly every conflict has been fought, heavy machine guns have become the most important weapons of war

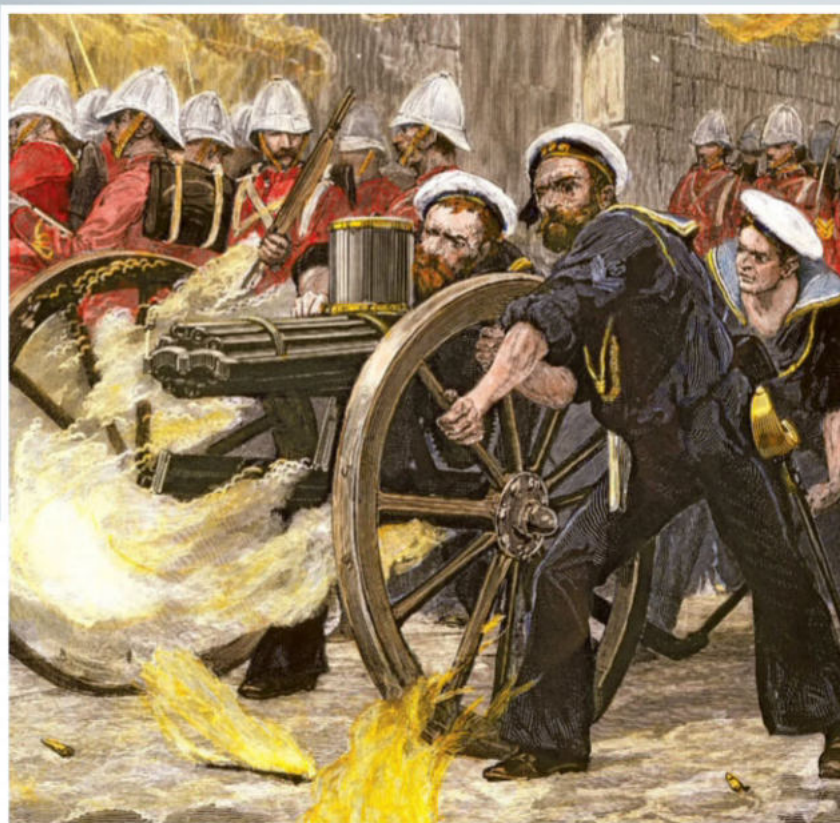


THE PUCKLE GUN THE 18TH-CENTURY MECHANICAL GUN

Introduced: **1717**

Country: **Britain**

In 1718, James Puckle patented his tripod-mounted flintlock revolving gun, which he called 'The Defence'. Capable of an impressive 63 rounds per minute, Puckle's gun was tested by the British Army's board of ordnance in 1717 and 1722 but never adopted. While revolutionary at the time, it proved impractical and never saw action.



Above: British forces used a Gatling gun to occupy Alexandria in 1882

THE GATLING GUN

THE WORLD'S FIRST PRACTICAL 'MACHINE' GUN

Introduced: **1861** Country: **USA**

This machine gun was invented by Dr Richard Gatling, a dentist, who hoped it would minimise the number of men needed to fight during the US Civil War. Although the Gatling saw little use during the war, it quickly became an instrument of empire and was extensively used by the British Army during the 1870s and 1880s.

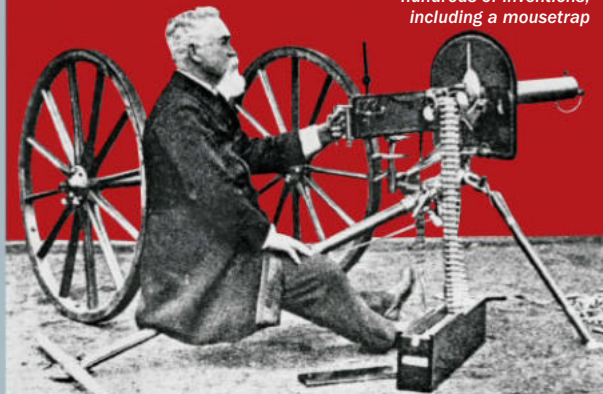
THE MAXIM GUN

THE WORLD'S FIRST TRUE MACHINE GUN

Introduced: **1884** Country: **USA**

Hiram Maxim's gun was the first truly automatic machine gun. Its awesome firepower was quickly recognised and the Maxim was adopted by nations around the world. It garnered its infamous reputation during countless colonial campaigns and World War I, where its rapid fire cut down men in swathes.

Hiram Maxim patented hundreds of inventions, including a mousetrap



THE MITRAILLEUSE

EUROPE'S OWN GATLING GUN

Introduced: **1851** Country: **Belgium/France**

Developed by a Belgian officer in the 1850s, the mitrailleuse had up to 37 separate barrels that fired in sequence. The gun could be fired as quickly as the crew could load the plates of ammunition – up to 300 rounds per minute. Although used during the Franco-Prussian War, it failed to turn the tide in France's favour.

The Reffye mitrailleuse was exported as far as East Asia



KORD HEAVY MACHINE GUN

RUSSIA'S LATEST MACHINE GUN CAPABLE OF IMPRESSIVE ACCURACY

Introduced: 1998 Country: Russia

Firing a huge 12.7x108mm round, the Kord is a true heavy machine gun. Developed in the mid 1990s as a replacement for aging Soviet guns, the Kord incorporates a buffer that dampens the weapon's recoil, allowing the operator to continue firing accurately on the target even at an impressive 700 rounds per minute.



Left: The Kord can be fired from a bipod, which is unusual for a .50 cal HMG

5 Facts about MACHINE GUNS

MAXIM'S AUTOMATIC AXE

When first demonstrating the accuracy and firepower of his invention, Maxim frequently cut down trees to the astonishment of watching army officers, foreign dignitaries and royalty.

HITLER'S BUZZ SAW

So high was the rate of fire of the Nazis' MG 42, up to 1,200 rounds per minute, that American GIs likened the ripping sound it made when firing to a saw cutting wood.

AN AMERICAN KNIGHT LIVING IN LONDON

In 1900, the American machine gun inventor Hiram Maxim became a naturalised British subject. In 1901, Maxim was knighted by his friend Edward VII for services to the Empire.

WAXING LYRICAL

In 1898, the Maxim became the first machine gun to be immortalised in poem. In his book *The Modern Traveller*, Hilaire Belloc wrote: "Whatever happens, we have got. The Maxim gun, and they have not."

OUT-MANNED, OUT-GUNNED

When the British Expeditionary Force arrived in France in August 1914, they brought just 140 machine guns, two for each battalion. The German army they faced was armed with more than 5,000.

MG 42

NICKNAMED HITLER'S BUZZ SAW, THE MG 42 WAS FEARED BY ALLIED TROOPS

Introduced: 1942 Country: Germany

The MG 42 was the first of a new kind of machine gun. It was a general purpose machine gun, light enough to be moved easily but capable of sustaining high rates of devastating fire. Able to fire a blistering 1,200 rounds per minutes, variants of the MG 42 are still in use today.

**"CAPABLE OF A
BLISTERING 1,200
ROUNDS PER MINUTE,
VARIANTS OF THE MG 42
ARE STILL IN USE TODAY"**



The MG 42 was used extensively by the Wehrmacht during World War II

BROWNING M2

THE OLD RELIABLE, ALL-AMERICAN GUN

Introduced: 1933 Country: USA

One of the US military's longest-serving weapons, John Browning's .50-calibre air-cooled M2 was originally designed to be an anti-tank weapon, but has found a home in the wings of fighter planes, on top of tanks and on the battlefields of most major wars since 1945.



Afghan National Army Recruits fire Brownings as part of their training

Right: An M2 .50 calibre mounted on an Arizona Army National Guard Humvee

Images: Alamy



HEAD TO HEAD

With the power to stop nearly any assault in its tracks and strike fear into the hearts of the enemy, heavy machine guns were lethal battlefield tools

MASCHINENGEWHER 42 (MG 42)

YEARS IN OPERATION: 1942-45
ORIGIN: NAZI GERMANY

RATE OF FIRE

The MG 42 fired an astonishing 1,200 rounds per minute from its belt-fed breech. A lack of accuracy was compensated for with this immense rate of fire that created a wall of bullets.

RANGE

The gunner's preferred tactic was to spray bullets in an arc over a small area. The firing range was dependent on adjustments but was most effective at up to 2,000 metres (6,560 feet).

TOTAL

DAMAGE

The 7.92x57mm cartridges were used extensively on both the MG 42 and its predecessor the MG 34, but are now obsolete in warfare after originally being adopted in 1888.

FLEXIBILITY AND CAPABILITY

The MG 42 was extremely flexible when attached to a bipod or a tripod. It could also function as both a light and medium machine gun.

MECHANISM

The high rate of fire caused one major issue: overheating. Also, the gun had huge recoil, which hindered the accuracy and aiming of inexperienced gunners.

HITLER'S BUZZSAW: THE MG 42

As the 1940s dawned, the Third Reich desired a better heavy machine gun than the MG 34. Expensive and flawed, it was replaced by the MG 42 to great success. Boasting an incredible rate of fire, each gun only cost 250 Reichsmarks and 75 hours of work to produce. 400,000 were manufactured during the war, as it was used in tandem with the MG 34 in defending the rapidly shrinking Reich. It was meant to be replaced in 1945 by the new MG 45, but these were never fielded as the Allies overran Nazi Germany and the war ended.



“Boasting an incredible rate of fire, each gun only cost 250 Reichsmarks and 75 hours of work to produce”

“Incredibly versatile, they could be used as anti-aircraft weapons aboard ships or close-range guns on boats and combat vehicles”



The M2 HB was improved further in 1938 with more power at a longer range

‘MA DEUCE’: THE M2 HB BROWNING

An array of machine guns under the Browning name have served the USA since the final years of the 19th century. The M2 HB was created in 1932 and was the first to be air cooled rather than water cooled – a massive development in weight saving and efficiency. Incredibly versatile, they could be used as anti-aircraft weapons aboard ships or close-range guns on boats and combat vehicles. 400,000 HB units were made during World War II and production of its successors still continues to this day.

BROWNING M2 HB (HEAVY BARREL)

YEARS IN OPERATION: 1933-PRESENT

ORIGIN: USA

RATE OF FIRE

The Browning is a much older gun than the MG 42, which is evident in its rate of fire. At approximately 450-600 rounds per minute, it pales in comparison.

RANGE

The Browning’s maximum effective range was 1,830 metres (6,003 feet) when it sprayed bullets, but it could also take out individual targets at a range of 1,500 metres (5,019 feet).

DAMAGE

The M2 HB preferred sheer brute strength to rate of fire. Its .50 cal ammo was extremely powerful and is still used today in armour-piercing rounds and sniper rifles.

FLEXIBILITY AND CAPABILITY

Used in aircraft, by ground troops and in vehicles, the Browning was an excellent all-rounder for the US armed forces not just during World War II but also in other conflicts during the 20th century.

MECHANISM

The HB version of the Browning was air cooled rather than water cooled like its predecessor, so overheating was much less of an issue than on the MG 42.

TOTAL



HEAVY MACHINE GUNS OF THE WORLD

The most revolutionary weapon of the 20th century, the machine gun has played a pivotal role in conflicts all over the globe



M2 Browning .50 cal

Calibre: .50 calibre (12.7x99mm)
In service: 1933-present
Location: USA

M134 Minigun

Calibre: 7.62x51mm
In service: 1963-present
Location: USA



MG 34

Calibre: 7.92x57mm
In service: 1936-45
Location: Germany

Breda M37

Calibre: 8x59mm Breda
In service: 1937-60
Location: Italy

Maxim Gun

Calibre: Various
In service: 1887-1970
Location: UK

Vickers Gun

Calibre: .303 and 7.62x51mm
In service: 1912-68
Location: UK

vz37/Besa 7.92mm

Calibre: 7.92x57mm
In service: 1937-70
Location: Czechoslovakia/UK

Hotchkiss Model 1897

Calibre: 8x50R Lebel
In service: 1897-1945
Location: France

FN MAG

Calibre: 7.62x51mm
In service: 1958-present
Location: Belgium

AAT-52

Calibre: 7.5x54mm and 7.62x51mm
In service: 1952-present
Location: France

1 THE BATTLE OF ULUNDI

ULUNDI, SOUTH AFRICA 4 JULY 1879

The last battle of the Zulu War, Ulundi sees a small British army using two Gatling guns to fend off 15,000 Zulu Warriors. Firing for 30 minutes, they cut down more than 2,000 warriors.

The first British Gatling gun battery fought at the Battle of Ulundi



2 THE BATTLE OF OMDURMAN

OMDURMAN, SUDAN 2 SEPTEMBER 1898

General Kitchener crushes the Mahdist army near Khartoum. British Maxim guns open fire at extreme range and inflict terrible casualties until the Mahdist charge crumbles just 50 metres from the British line.

3 THE BATTLE OF SAN JUAN HILL

SAN JUAN HILL, CUBA 1 JULY 1898

Teddy Roosevelt and the Rough Riders storm Spanish positions under covering fire from a battery of Colt M1895s and Gatling guns commanded by Lieutenant John 'Machine Gun' Parker.

SG-43 Goryunov

Calibre: 7.62x54mmR

In service: 1943-68

Location: Russia

DSHK

Calibre: 12.7x108mm

In service:

1938-present

Location: Russia

Kord

Calibre: 12.7x108mm

In service:

1998-present

Location: Russia

Type 92

Calibre: 7.7x58mm

In service: 1932-45

Location: Japan

Type 77

Calibre: 12.7x108mm

In service:

1980-present

Location: China



A two-man Vickers machine gun team operating while wearing gas masks

4 THE BATTLE OF THE SOMME

NORTH-EAST FRANCE JULY-NOVEMBER 1916

Following an earth-shattering five-day artillery bombardment, British infantry charges across No Man's Land expecting to come across little resistance, but are cut down in their thousands by German Maxim guns.

5 THE BATTLE OF GUADALCANAL

GUADALCANAL, SOLOMON ISLANDS

24-25 OCTOBER 1942

Sergeant John Basilone single-handedly mans a Browning M1917A1, holding off wave after wave of Japanese troops for three days, breaking up the Japanese advance and winning the Medal of Honor.



Sergeant John Basilone

6 THE BATTLE OF PORK CHOP HILL

YEONCHEON, SOUTH KOREA MARCH-JULY 1953

UN troops face an unexpected Chinese onslaught, holding a series of key outposts. Browning M1919A4 machine guns are crucial in holding off the Chinese human wave attacks.



7 SYRIAN CIVIL WAR

SYRIA 2011-PRESENT

Lacking any air support of their own, the Free Syrian Army utilises DShK heavy machine guns to take on government jets. Mounted on the backs of pickup trucks and veiled in camouflage, these improvised mobile anti-aircraft guns are the only way to defend attacks from the air.

8 THE BATTLE OF KAMDESH

KAMDESH, NURISTAN PROVINCE, AFGHANISTAN

3 OCTOBER 2009

Taliban insurgents overrun a US outpost, breaching the defensive perimeter. Sustained and concentrated fire from M240 machine guns holds them off long enough for help to arrive.

5

The M240B is the standard infantry heavy machine gun of the US Army



ATTACK ON HIGH WOOD

August 1916 saw the 100th Machine Gun Company fire an epic 12-hour barrage in support of an infantry attack

Amid the chaos and carnage of the Battle of the Somme, a small wood became a focal point of the fighting. High Wood had originally been part of the German secondary trench line but when British troops stormed their frontline, it became the centre of their defences. Over the next three months the British made continued attacks against the wood, but the area's geography meant British artillery was unable to support the attacks with accurate shelling for fear of hitting their own troops. Instead, the next attempt would be supported by a concentrated machine gun barrage to break up German resistance and hold off reinforcements.

"THE COMPANY FINALLY CEASES FIRE HAVING UNLEASHED A TOTAL OF 99,500 ROUNDS IN JUST OVER 12 HOURS"

THE BLISTERING BARRAGE OF HIGH WOOD

1 WOOD ABANDONED

Initial success during the Battle of Bazentin Ridge had seen the British briefly occupy High Wood on 14 July, but the success was not capitalised on and the wood was abandoned to the enemy the next day.

2 SETTING UP

On 24 August, the 100th Machine Gun Company begins setting up, training their guns on German positions 2,500 yards away. At 5.45pm, seven of the company's Vickers guns open fire to prepare the way for the infantry to go in.

3 FALLING SHORT?

At 6.26pm, the battery ceases fire as they fear that their shots are falling short. Captain Seton-Hutchison, the company's commander, knows this is not the case and at 6.40pm, firing resumes.

4 BARRAGE FIRE

Seven of the company's guns are raining down indirect fire onto the German line, being used almost as artillery. Fire from the guns arcs over the battlefield plunging into German positions as the infantry of the 100th Brigade attack the wood.

5 THIRSTY WORK

By 7.40pm, water for the guns' cooling jackets is becoming scarce, but the company's guns have had no mechanical problems after two hours of continuous fire. The men are busy loading ammunition into the Vickers guns' cloth belts.

6 OVERHAUL

At 8pm, the company begins to alternately overhaul, clean and replace the barrels of the guns to maintain a continued fire. The company ceaselessly rains down hundreds of rounds per minute with 67,000 rounds fired onto enemy positions so far.

7 HIGHLANDERS TO THE RESCUE

Sections from the Highland Light Infantry of the 33rd Division are hard at work bringing up fresh supplies of ammunition and water for the guns' cooling jackets, which have to be continually refilled.

8 RUNNING DRY

The guns' barrels are becoming red hot and the company are so desperate for water that during the night the machine gunners give up their personal water bottles to fill the guns' cooling jackets.

9 FALL BACK!

The three battalions of the 100th Brigade are unable to break through the German line, so fall back having been unable to capture High Wood. Attacks will continue throughout August until the wood finally falls on 14 September.

10 CEASE FIRE

On 25 August, at 6.10am, the company finally ceases fire having unleashed a total of 99,500 rounds in just over 12 hours, holding German reinforcements at bay and covering the attack and retreat of the 100th Brigade.

Soldiers in the Machine Gun Corps being trained to use the Vickers gun



THE MACHINE GUN CORPS THE DEDICATED PROFESSIONALS OF THE MACHINE GUN CORPS, RESPONSIBLE FOR THE BRITISH ARMY'S MACHINE GUNS

The British Army had entered the war with just two machine guns per battalion. In contrast, the Imperial German Army had embraced the new weapon and fully integrated it into their infantry regiments. As the stalemate of trench warfare took hold, the British quickly learned how to best use the machine gun and in October 1915 the Machine Gun Corps was formed. New tactics for the massed use of machine guns were developed and published in the official manual *The Employment Of Machine Guns*. One of the new tactics was 'barrage fire', where groups of guns fired indirectly to prevent enemy troop movements, give covering fire, or generally harass and suppress the enemy. One of the first uses of this long-range barrage technique was by the 100th Machine Gun Company at High Wood, during the Battle of the Somme. The Machine Gun Corps fought in every major theatre of the war, with its men winning seven Victoria Crosses. The corps was finally disbanded in 1922 but the venerable Vickers remained in service.

FAMOUS OPERATION: ATTACK ON HIGH WOOD



MACHINE GUN INVENTORS

From humble beginnings, John Browning created some of the most iconic heavy machine guns ever made

JOHN BROWNING 1855-1926 USA

As a young man from Ogden, Utah, John Moses Browning could often be found in his father's gunsmith shop studying the firearms on display. He would spend his days making simple guns out of scraps from the workshop and shooting prairie chickens. By the age of 13, Browning had made his first rifle and from there the only way was up. An inventive and dedicated worker, even he would not quite believe the impact his firearms would have on warfare. Many upgrades later, the M2 Browning machine gun is still in use today and shows no signs of slowing down.

The young inventor's first design was a single-shot rifle, breach- rather than muzzle-loaded. It seems simple now, but this was revolutionary in the late-19th century and Browning went on to have a fruitful relationship with the Winchester Repeating Arms Company, who paid him £5,255 for his first rifle. He also developed repeating rifles and pump-action shotguns, but his shot at success came when he turned his attention to automatic rifles, especially heavy machine guns.

The Gatling gun was the classic machine gun of the era, but Browning knew he could go one better. By utilising energy made from firing, he devised a gun that could load and cycle rounds much faster than anything before. The crude hand crank from the Gatling was dispensed with as the expanding gas from the recoil allowed the new weapon to fire automatically.

The Colt-Browning M1895 was born and it became the first machine gun to be officially adopted by the US military. The firearm proved to be extremely versatile as it was used on tripods, horse-drawn carriages, boats, aircraft and armoured cars. It was used extensively and found success during the Boxer Rebellion



John Browning inspects the Browning automatic Rifle (BAR), a US light machine gun that he also designed

and the Spanish-American War. It received its first major upgrade in 1895, when the gases were diverted out of the mechanism by a hole drilled in the back of a barrel. Breaking from the Winchester Company, the inventor began a cross-Atlantic partnership with Belgian weapons producer Fabrique Nationale de Belgique. In fact, all of the large gun producers of the era, Savage, Colt, Remington and Franchi, wanted a piece of Browning's revolutionary creations.

Further upgrades were made to the Browning when the USA joined World War I. The machine gun helped drive the Germans back as it joined forces with its British equivalent, the Vickers.

Today, it is estimated that 30 million weapons are based on Browning's designs, from pistols to heavy machine guns. Up until the 1980s, the US Army used Browning firearms almost exclusively as their semi-automatic and automatic weapons of choice. It was a remarkable achievement for a man who died in 1926 and never really saw the effect his weapons had on the world.

AMERICA'S GUN MEN

SIR HIRAM STEVENS MAXIM 1840-1916 USA

Like many inventors of the age, Maxim was skilled in lots of fields

and began by developing hair-curling irons and locomotive headlights. A lifelong interest in automatic weapons, however, led him to create the first fully automatic machine gun, the Maxim gun, which was incorporated into every major army across the globe.



BENJAMIN BERKELEY HOTCHKISS 1826-85 USA

Hotchkiss began his inventing career designing guns for the Mexican government.

After a livelihood of developing shells, he began work on his finest creation, the Hotchkiss machine gun. The weapon's early success allowed him to form a company with the gun and it was in use in the British Army up until World War II.



RICHARD JORDAN GATLING 1818-1903 USA

The father of all machine guns, Gatling's invention was a game changer in automatic

weapons production. Initially a student of medicine, he changed tack in 1861 and developed the weapon a year later. The design was used in warfare all over the world, from the American Civil War to the Anglo-Zulu War.



THE BROWNING ARSENAL

THREE OF THE MOST POPULAR AND EFFECTIVE HEAVY MACHINE GUNS

M1895 COLT-BROWNING CALIBRE: .30-06

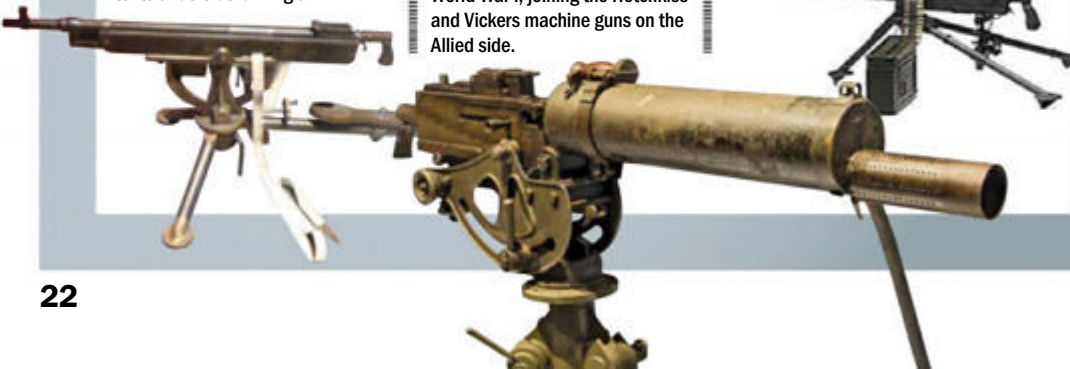
Sold under the Colt banner, it was nicknamed 'the potato digger' due to its underside-driving arm.

M1917 BROWNING CALIBRE: .30-06

The second of Browning's designs first entered the fray in World War I, joining the Hotchkiss and Vickers machine guns on the Allied side.

M1919 BROWNING CALIBRE: .30-06

Rather than having a water-cooled jacket, the M1919 utilised a new air-cooled system that was much more efficient.



"GATLING'S INVENTION WAS A GAME CHANGER IN AUTOMATIC WEAPONS PRODUCTION"

Britain

Waterloo



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ANATOMY OF A...

VICKERS-MAXIM GUN

Improving on Hiram Maxim's original design, the Vickers gun served the British Army for more than 50 years

THUMB TRIGGER

To fire, the gunner would grip the two wooden 'spade grips' and depress the trigger with their thumb. Holding the trigger down could fire the gun until it ran out of ammunition.

SPADE GRIPS

TOP COVER

Unlike the Maxim gun it was developed from, the Vickers had a separate top cover and feed-block cover, but these were only opened to clear jams or clean the gun.

REAR SIGHT

The Vickers could be fired directly or indirectly with the gun's sights graduated out to several thousand metres, with a maximum range of 4,100 metres (just under three miles) when fired indirectly.

TOGGLE LOCK

Both the Maxim and Vickers use a bending toggle link to lock their actions closed when firing. One of the Vickers gun's improvements was to reverse the direction in which the toggle bent, saving space and weight.

CHARGING HANDLE

The charging lever had to be pulled back by the gunner to chamber the first round, readying it to fire. The handle reciprocated back and forth while firing, leading to many a bruised knuckle during training.

ELEVATING WHEEL

FEED LIP

In order for the Vickers gun's cloth belt to feed into the gun properly, an angled brass lip helped prevent jams.

FUSEE SPRING

Mounted on the side of the gun's receiver was a hefty spring, which was fully adjustable. By increasing or decreasing the spring's tension, the Vickers gun's rate of fire could be increased or decreased.

WATER JACKET FILLER PLUG

FEED BLOCK

250-ROUND CLOTH BELT

TRIPOD



Left: Troops of the Middlesex Regiment carry out maintenance on a Vickers machine gun at Anzio in February 1944



Above: The 1st Manchester Regiment, stationed in Malaya, fire a Vickers machine gun in October 1941

VICKERS-MAXIM GUN

CALIBRE: .303
LENGTH: 115CM
WEIGHT: 18KG/40LBS
FEED: 250-ROUND BELT
RATE OF FIRE: 450-500 ROUNDS PER MINUTE
IN SERVICE: 1912-68

Right: Men from 5th (Scots) Parachute Battalion, 2nd Parachute Brigade, fire a Vickers machine gun from a rooftop in Athens in December 1944



FORESIGHT

WATER JACKET

With sustained fire, the barrels of machine guns quickly become red hot. To combat this, the Vickers had a water-filled cooling jacket holding 4.3 litres. When firing, this evaporated, cooling the barrel. It made the gun heavier and had to be frequently refilled.

BARREL

Without water, the barrel would have overheated within several hundred rounds, eventually ruining its accuracy and causing malfunctions. Even with a full water jacket the barrel would heat up and had to be frequently changed during sustained firing.

DRAIN PLUG

MUZZLE CONE

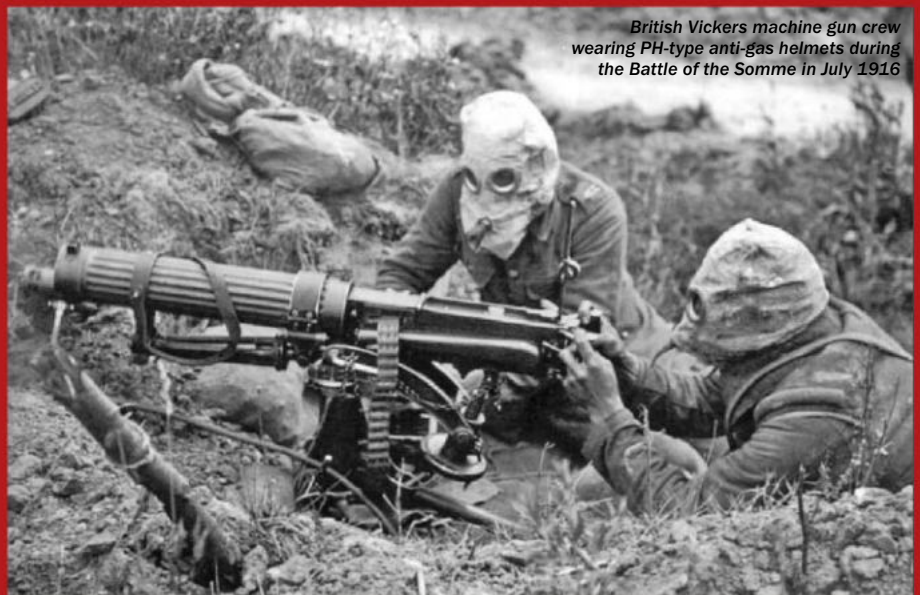
The conical muzzle cone was one of the improvements to the original Maxim. It harnessed gases, leaving the muzzle to help cycle the gun's action. The cone itself was also designed to deflect incoming fire away from the water jacket.

“THE VICKERS GUN ENTERED SERVICE JUST IN TIME TO SEE ACTION DURING WORLD WAR I, WHERE IT PROVED TO BE EXTREMELY RELIABLE EVEN IN THE WORST CONDITIONS”

THE BRITISH VICKERS GUN

The machine gun has dominated the battlefield since its invention in the 1880s, changing the way wars were fought forever. The British Army first used Maxim Guns during the Matabele War in 1893, but by the early 1900s was seeking an improved machine gun. Vickers Ltd developed a lighter, simpler and improved gun that was adopted in 1912. The Vickers gun entered service just in time to see action during World War I, where it proved to be extremely reliable even in the worst conditions. It remained in use throughout World War II and the Korean War before retiring in the late 1960s.

“THE MACHINE GUN HAS DOMINATED THE BATTLEFIELD SINCE ITS INVENTION IN THE 1880S”



British Vickers machine gun crew wearing PH-type anti-gas helmets during the Battle of the Somme in July 1916

THE BIRTH OF THE GATLING



Gatling guns were
also commonly
used on warships

THE BIRTH OF THE GATLING

Jonathan Ferguson, curator at the National Firearms Centre, explains how this early machine gun changed the face of war



HOW WAS THE GATLING GUN DEVELOPED?

Richard Jordan Gatling was not a gunmaker by trade, nor, like his successor Maxim, a professional engineer. He was essentially a hobbyist inventor. He professed to have created his gun with humanitarian intent, having witnessed the extensive casualties sustained during the opening battles of the American Civil War.

A letter of 1877 stated: "It occurred to me if I could invent a machine – a gun – that could by its rapidity of fire enable one man to do as much battle duty as a hundred, that it would, to a great extent, supersede the necessity of large armies, and consequently, exposure to battle and disease be greatly diminished." Of course, the opposite was to be proven the case in years to come.

WHY DID LATE 19TH-CENTURY WARFARE NEED RAPID-FIRE WEAPONS?

Increased rates of fire had been the holy grail of firearms design for centuries. As the first remotely practical weapon with high rates of fire, the Gatling appealed initially as a defence weapon for naval vessels.

It also had potential on land for countries with empires or imperial aspirations. The gun would allow smaller units to punch above their proverbial weight in situations where their supply lines might be stretched and the enemy encroaching in greater numbers.

THE GATLING WAS USED SPARINGLY IN THE AMERICAN CIVIL WAR, HOW MUCH DID IT CONTRIBUTE TO THE CONFLICT?

Despite extensive efforts to increase small arms firepower at the time, including breech-loading rifles, magazine repeaters, crude 'battery guns' and early machine guns like the Ager 'coffee mill gun', the superior Gatling design made little impression during the conflict itself. No guns were purchased by the US government, but Major General Benjamin F Butler did procure 12 of the design at a cost of \$1,000 each in 1864, and it

is claimed that these saw some limited use. However, at this stage, the guns were expensive, unproven and unreliable.

Adoption by forward-thinking officers like Butler only confirmed the prejudices of his more conservative counterparts who were wedded to cavalry shock action, well-drilled musketry and the 'spirit of the bayonet'. To them, the Gatling was at best a novelty, and even after adoption the gun was still seriously under-utilised.

THE GUN WAS PORTED ACROSS THE GLOBE AFTER THE CIVIL WAR, WHAT MADE IT SO APPEALING?

Early interest in the Gatling was with static defence in mind, replacing traditional rank and volley musketry and artillery pieces with a small number of Gatlings. Two guns could provide greater firepower than an entire company of infantry. Many commanders, however, especially in the US, struggled to see the utility of these weapons in conventional warfare against a 'civilised' enemy, and either ignored them entirely or relegated them to use against perceived 'savage' enemies.

In this role, their firepower could overcome a numerical disadvantage against technologically inferior opponents, and potentially deliver a psychological blow at the same time. The classic example might be the Battle of Ulundi in 1879, where 5,000 infantry were able to defeat 12,000 Zulu warriors.

DID GUNNERS HAVE TO GET USED TO THIS NEW STYLE OF WARFARE?

It was not until World War I that the true value of machine guns was appreciated. However, one action in the Spanish-American war did show the way forward for machine gunnery. During the counterattack at the Battle of San Juan Hill on 1 July 1898, Lieutenant John Henry 'Machine Gun' Parker's tiny four-gun battery of Model 1895 guns punched far above its weight. The guns first provided

covering and suppressive fire for the outnumbered US infantry as they advanced and then, crucially, moved up with them in support. The gunners even sustained their fire as the guns were moved forwards, foreshadowing the capability of the machine gun-equipped British 'female' tanks of World War I and indeed of light machine guns like the Lewis gun.

As a member of the Rough Riders later recalled: "The Gatlings enfiladed the top of the Spanish trenches, keeping them down or killing them. We'd never have taken San Juan Hill without Lieutenant Parker's Gatling guns." Finally, they were mounted in static defensive positions to keep the Spanish at bay. The machine gun had proven its true worth.

DID IT FUNDAMENTALLY CHANGE THE WAY THAT WARS WERE FOUGHT?

The weapon should have changed warfare, but its impact was minimal. It suffered from being the first practical machine gun; it took decades for tactics and military requirements to catch up with its potential as a support weapon for infantry and, later, combined arms operations. By this time Maxim was working on his recoil-operated gun, and it was this family of weapons that went on to dominate the machine gun class and change modern warfare forever by providing

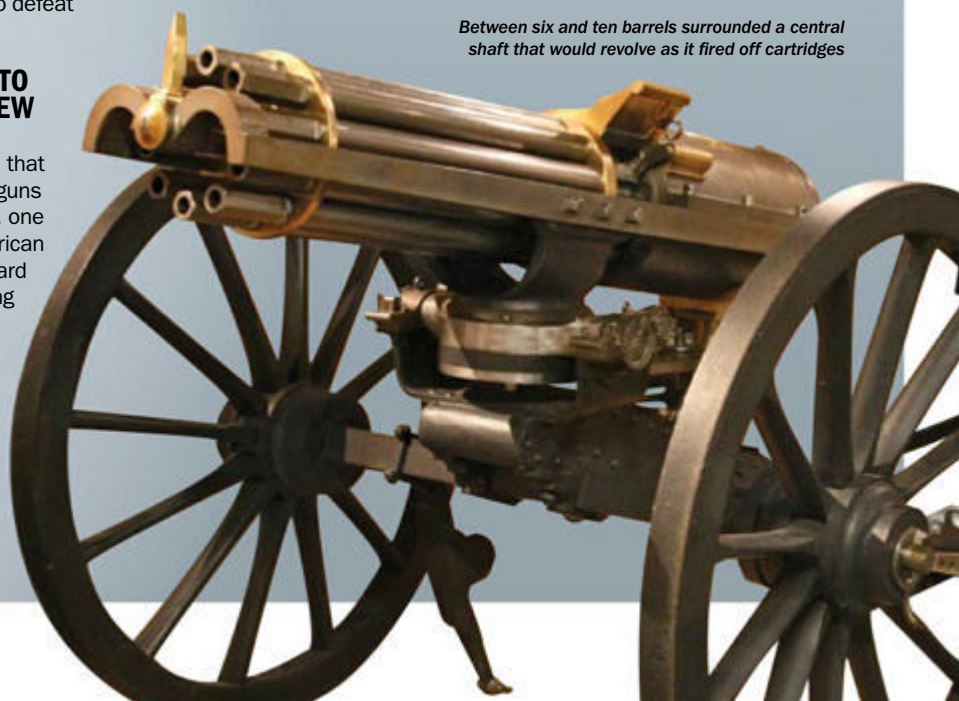
a rapid-fire rifle-calibre weapon that could move with and support infantry.

The Gatling was capable of serving in this role, but was less suited than later designs. Unlike the Gatling, the Maxim required only one barrel and mechanism, making it far more portable than even the lightest Gatling. An automatic mechanism could be belt fed, solving the issue of reliable ammunition feed that dogged the Gatling from the beginning.

HOW CAN ITS INFLUENCE BE SEEN IN MODERN WARFARE?

Despite losing out to the Maxim, the Gatling is very much alive and well in the form of weapons like the 7.62mm M134 Minigun and its bigger automatic cannon brothers the 20mm M61 Vulcan and the 30mm GAU-8 Avenger. Modernised electrically driven Gatling designs re-emerged in the 1950s as aircraft guns, and have since been mounted to vehicles. The key improvements are belt feeds and electrical power, permitting the Gatling to not only compete with gas and recoil-operated designs, but to exceed their sustained fire capability. By taking advantage of air-cooled multiple barrels and electric motor technology, they are capable of 6,000 rounds per minute. Though they may appear light years ahead of Gatling's original design, his patented rotating barrel cluster and reciprocating breech layout is preserved intact, 150 years since its invention.

Between six and ten barrels surrounded a central shaft that would revolve as it fired off cartridges



ON THE BICENTENARY OF THIS CLASH OF NATIONS, EXPLORE THE DECISIONS, THE
ARMIES, AND EVERY INCH OF THE WORLD'S MOST FAMOUS BATTLEFIELD

WATERLOO

WORDS JACK GRIFFITHS & TIM WILLIAMSON



Chris Collingwood



2000

As dawn broke on 18 June 1815, thousands of soldiers from nearly every corner of Europe slowly emerged from their rain-soaked bivouacs and looked out across the small patch of Belgian farmland they found themselves in. Men in the French, Prussian and Anglo-Dutch camps knew what an almighty clash of arms the day would bring, but few could have foreseen the slaughter to come. As orders rang out to fall in, many must have feared they would not see the day's end.

The Battle of Waterloo was a final, brutal fullstop to what was known up until the 20th century as the Great War. Between 1803 and 1815 nearly every European nation threw its full weight into the series of conflicts more commonly known as the Napoleonic Wars. Waterloo would not only decide the fate of a resurgent Napoleon, but also of the nations of Europe lined up against him. For Arthur Wellesley, Duke of Wellington, and Gebhard von Blücher, Prussia's aging but experienced field marshal, the stakes couldn't have been higher – Europe's destiny was in their hands.

THE HUNDRED DAYS CAMPAIGN

RETURNED FROM EXILE, NAPOLEON QUICKLY RETOOK HIS THRONE AND MUSTERED THOSE LOYAL TO MARCH AGAINST EUROPE

On 29 February 1815, Napoleon landed at Golfe-Juan, south France, with just 1,000 men after escaping exile on the island of Elba. Less than a month later and he was entering Paris, the ranks of his army swelling with nearly every soldier the Bourbon king Louis XVIII sent to apprehend him. This began what historians would later call the Hundred Days – Napoleon's final campaign to cling to power.

Just a week previous, representatives of the great European powers had declared the former emperor an outlaw. By returning from his lawful exile, they claimed he "has placed himself without the pale of civil and social relations... and has rendered himself liable to public vengeance." Gathered at the Congress of Vienna, delegates from Great Britain, Russia, Austria and Prussia immediately pledged armies to support the authority of the Bourbon monarch and defeat Napoleon. These powers would form the backbone of the Seventh Coalition, the clenched fist poised to strike Napoleon down.



On his return from Elba, Napoleon was received positively by the army and much of the French population

After weeks of desperate negotiation, attempting to compromise France's position as well as his own, Napoleon realised that war was inevitable. With Anglo-Prussian forces gathering near Brussels, the emperor chose to take the fight to the allies in a bid to defeat them consecutively and broker a better deal for himself and for his country. While the

coalition made its own plans to invade France in July, Napoleon took the initiative on 15 June by invading what is now Belgium. He had to move fast to drive a wedge between the Duke of Wellington's British, Dutch and Hanoverian army and Count von Blücher's Prussian force, the combination of which greatly outnumbered his own Armée du Nord.

**"WHILE THE COALITION MADE ITS OWN PLANS TO INVAD
FRANCE IN JULY, NAPOLEON TOOK THE INITIATIVE ON 15 JUNE
BY INVADING MODERN-DAY BELGIUM"**





WATERLOO'S LEADERS

THE DUKE AND THE EMPEROR'S DECISION MAKERS

**HENRY PAGET,
2ND EARL OF
UXBRIDGE
GREAT BRITAIN**



A talented cavalry officer, Uxbridge was given command of the allied horse at Waterloo, with carte blanche from Wellington

to take action without orders if an opportunity presented itself.

**HRH WILLIAM, PRINCE
OF ORANGE
KINGDOM OF THE
NETHERLANDS**



Still in his early 20s and with little practical command experience, William was nonetheless given a senior commission in the British Army,

commanding the I Corps of Wellington's army at Quatre Bras and Waterloo.

**FRIEDRICH WILHELM
VON BÜLOW
KINGDOM OF PRUSSIA**



Commanding the Prussian IV Corps at the battle, the count was a veteran of the successful campaigns in France that led to Napoleon's

first exile. He had also defeated Marshal Ney at the Battle of Dennewitz.

**JEAN-BAPTISTE DROUET,
COMTE D'ERLON
FIRST FRENCH EMPIRE**



In command of Napoleon's I Corps during the battle, d'Erlon was considered to be a veteran soldier with more than 20 years' experience of battlefields,

stretching as far back as the Revolutionary Wars in 1792.

**SIR THOMAS PICTON
GREAT BRITAIN**



A veteran of Wellington's Peninsular War and a ruthless leader, Picton commanded the allied reserve. Before the battle of 18 June, it is said

he had a premonition he would not live to return to his native Wales. He didn't.

**JEROME BONAPARTE
FIRST FRENCH EMPIRE**



During the battle, Napoleon's younger brother, previously the king of Westphalia, was tasked with distracting Wellington

with an attack against Hougomont, on the coalition army's right flank.

**SIR JAMES KEMPT
GREAT BRITAIN**



Returning from fighting in the War of 1812 with the United States of America, Kempt was placed in charge of the British 8th

Brigade, which included the 1st Battalion of the 95th Rifles.

**MARSHAL MICHEL NEY
FIRST FRENCH EMPIRE**



Having fought beside Napoleon before his exile, in 1815 Ney marched under the orders of Louis XVIII to apprehend the former emperor after his return

from Elba, but joined him instead and served as his marshal once more.

Map taken from *The Battle Of Waterloo Experience* by Peter & Dan Snow, published by Andre Deutsch

THE MARCH TO WATERLOO

Encamped in and around Brussels, Wellington and his staff received continuous reports of rumoured French attacks across the border to the south; they were nearly all incorrect. On 15 June, confirmed reports of the French invasion reached the British command and by evening, the night of the now-famous Duchess of Richmond's Ball, the army was marching south.

Meeting the Armée du Nord commanded by Marshal Ney at Quatre Bras, Wellington's men came under immense pressure

but managed to block the French advance along the road to Brussels. Blücher's army, meanwhile, was forced to retreat from Ligny by a much larger force under the command of Napoleon.

With Marshal Grouchy pursuing the Prussians north, Napoleon gathered his main force and continued after Wellington, who encamped his army at Mont St Jean just south of Waterloo village. It was here that the British general decided he would make his stand, in the hope his Prussian ally could reach him in time.

British troops fighting in square formation at the Battle of Quatre Bras



THE BATTLE BEGINS

NAPOLEON AND WELLINGTON'S ARMIES COME FACE TO FACE ON A BELGIAN FIELD THAT RESEMBLES A SEA OF MUD

With the pouring rain dripping off their brows and their boots squelching in the thick Belgian mud, the morale of the soldiers of the Seventh Coalition was at a low ebb. The downpour on the night of Saturday 17 June was relentless, as the shivering and soaked troops sat on a ridge along the road to Brussels. Wellington may have had a warm bed in a nearby inn that night, but his mind could not shake the thought that just three miles south was Napoleon and his Grande Armée, and they would soon be on their way.

Wellington positioned his forces on the north-facing slope of the ridge near Mont St Jean, in a bid to shield the majority of his men from the inevitable barrage of the French guns. At the foot of the south-facing slope, three buildings lined his position facing the French advance: the manor of Hougoumont, as well as the farmhouses of Papelotte and La Haye Sainte. The latter of these lay in the centre of Wellington's line, making it a crucial position to hold to stop Napoleon's advance. Likewise, Hougoumont presented a vital position for defending the right flank of the coalition army. While Coldstream Guards and Nassau German infantry were garrisoned to defend Hougoumont, La Haye Sainte was manned by about 400 men from the King's German Legion, under Major Georg Baring.

Though he knew these defences were sturdy enough, Wellington was counting on Blücher's Prussian forces to arrive. On the morning of 18 June, they were still some miles east, pursued by Marshal Grouchy. After the ground had dried sufficiently to allow his artillery to be deployed,

Napoleon set his plans into motion. The emperor aimed to break through Wellington's centre, take the ridge and split his force. Seeing the advance of the French troops, Wellington instructed his men to avoid the inevitable artillery barrage and lay down in the sodden grass. Horizontal on the ground, the allied troops said their prayers and awaited the sound of French cannon.

Right: The King's German Legion was made up of some of the finest soldiers in the coalition and had uniforms to match. Though dressed like their British counterparts, their orders of command were made in German

Below: La Haye Sainte was one of Wellington's key defensive points at Waterloo. It held out for far longer than many anticipated and stunted Napoleon's advance



“THE ALLIED TROOPS SAID THEIR PRAYERS AND AWAITED THE SOUND OF FRENCH CANNON”



“THE ENTIRE PLAN DEPENDED ON WELLINGTON AND THE PRUSSIANS WORKING TOGETHER”

HISTORIAN AND BROADCASTER DAN SNOW ON THE MAKEUP OF WELLINGTON'S FORCES AND HIS PLANS FOR TAKING ON NAPOLEON

WHY DID WELLINGTON CHOOSE TO FIGHT NEAR WATERLOO? WHAT ADVANTAGES DID HE HOLD?

Waterloo sits bang alongside the road from Charleroi to Brussels. Wellington identified Mont St Jean as where he could make a good defence of Brussels. It was harder to attack up a ridge and he could hide his troops behind the fold in the ground. This

was one of Wellington's favourite tricks – to shelter from cannon fire. Wellington had reccied the area extensively before, and if he couldn't hold them at Quatre Bras, he could hold them at Waterloo.

WHAT TROOPS DID WELLINGTON HAVE TO CALL ON FOR THE BATTLE?

Wellington was very dismissive of his own army. He said he had a very poor army that was ill equipped. Many of the troops were newly raised levies because the allied states had only come back into existence a few months before, so an army of untrained and unproven officers had to be rebuilt. These troops may well have found themselves fighting for Napoleon a few years before, as many

of the German states had previously been under French control. Belgium and the Netherlands had just been reconstituted after a time as Napoleonic client states ruled over by Bonapartists. The army was unreliable and uncertain in its loyalty.

WERE THE COALITION COMMANDERS UNITED? WAS THERE ANY DISAGREEMENT OVER TACTICS AND DECISIONS?

The big issue was getting the relationship right between the coalition leaders. The entire plan depended on Wellington and the Prussians working together. Alone, he probably wasn't strong enough to deal with the entire might of Napoleon's army. Allied with the Prussians, he probably would be.

Our continental allies have always been very suspicious of us Brits and in 1815, the minute



DEPLOYMENT

IN A MATTER OF HOURS, MORE THAN 100,000 MEN WOULD ENGAGE IN A BATTLE THAT WOULD SETTLE THE FATE OF EUROPE FOR AT LEAST A CENTURY

ASSEMBLY OF THE GRANDE BATTERIE

Despite being hastily assembled weeks earlier, the troops of the Grande Armée counted many veterans among their ranks and morale remained high. Artillery was set up in the centre of the French ranks so to concentrate fire on the enemy lines - a tactic pioneered by Napoleon.

THE ALLIED COALITION

Outnumbered and outgunned, with many seasoned British troops still station in North America. Those left would be ably assisted by allies from Brunswick and Hanover, and militia from several other Dutch and German principalities. Last, Wellington had the trusty 95th Rifles Regiment.

MONT ST JEAN

At the heart of the allied ranks, this acted as a field hospital during the battle. After the overnight rain, the battlefield had become a swamp and Napoleon's artillery would do well to make it all the way here.



Map taken from *The Battle of Waterloo Experience* by Peter & Dan Snow, published by Andre Deutsch

SECURING HOUGOUMONT

This farmhouse would become a key outpost during the battle. Wellington reached it first and deployed a selection of companies from Nassau and Hanover as well as the Coldstream Guards. With their backs to the wall, the allies were commanded to defend Hougomont to the very last man.

PAPELOTTE AND THE EASTERN ROAD

Casting his eyes to the left, Wellington watched the small hamlet of Papelotte nervously. If the Prussians were ever going to arrive, this is where they would show up. He and Blücher had a pact, but would they have regrouped in time after their tactical loss to the French at Ligny?

LA HAYE SAINTE

The farm here was made into a sturdy and well-defended compound by the King's German Legion. One of the best units in the allied army, it was made up of Hessians and Hanoverians who had ample experience fighting in the name of Britain.

Napoleon crossed the border, everyone thought the British would head off on their ships back to Blighty. A key moment was when Wellington promised Blücher that he would stand and fight. There was a disagreement in the Prussian high command about whether Wellington was a man of his word, but thankfully Blücher believed him and sent a corps or two of infantry to help swing the battle in Wellington's favour.

WHAT DID THE ALLIES KNOW ABOUT NAPOLEON'S ARMY?

The allies would have made estimates about how many men Napoleon could call on. He had a large pool of veterans to summon but they were unsure how many

Left: A mainstay of the British Army since 1812, the Belgic shako replaced the stovepipe shako. Lace was silver or gold for officers, depending on regulations.



“OUR CONTINENTAL ALLIES HAVE ALWAYS BEEN VERY SUSPICIOUS OF US BRITS”

Napoleon would send to his northern army and how many would be kept in reserve. In fact, Napoleon had gone north with 130,000 men, a bolder move than the allies were expecting. Napoleon had very successfully cut all communication and no news had filtered out since he left Paris. The allies didn't know where and when Napoleon was going to cross the border or with how many men.

WHAT MUST MORALE HAVE BEEN LIKE IN THE RANKS ON THE MORNING OF THE BATTLE?

Morale wasn't great. Wellington's men had spent a night in the pouring rain while sleeping on the ground. Their clothes were sticking to them, they were freezing cold and looking forward to a bed

in Brussels. There was a lot of uncertainty and general misery caused by the driving rain. We struggle to remember now, with our waterproof clothes, that these guys in their broadcloth and wool had uniform that shrunk when they got wet.

IN YOUR OPINION, WHAT WAS THE MOST IMPORTANT MOMENT OF THE BATTLE OF WATERLOO?

I think probably Wellington's left surviving and stabilising its lines after the first massive attack by d'Erlon. On the eastern half of the battlefield, Napoleon feinted to his left and launched a hammer blow on Hougomont to draw British attention to the west, because of course the British were worried about the west as it was their route to sea and the protective embrace of the Royal Navy. The British left wing was driven back but Uxbridge identified that the heavy cavalry was required to break up the French attack, and they did so very effectively. This allowed Wellington to maintain his defensive posture and wait for nightfall and the Prussians.

FROM HOUGOU MONT TO THE BRITISH CAVALRY CHARGE

AS CANNONS BLAZED AND INFANTRY CLASHED, IT WAS LEFT TO THE COALITION HEAVY CAVALRY TO RIDE IN AND SAVE THE AFTERNOON FOR WELLINGTON

It had been a long time since Austerlitz, but the fire in Napoleon's belly was still strong as he rode up and down his ranks to cries of "vive l'empereur!" Hidden behind the brow of the ridge, Wellington's men waited for the inevitable artillery bombardment, while those garrisoned in the farm houses in front of the slope knew they would bear the brunt of the French attack.

Intended as a diversion while the main artillery pummelled the centre, Napoleon instructed his brother, Jerome, to lead an infantry division to Hougoumont. Scaling the compound, they smashed through the gate but were cut down in the close confines of the farmyard. This tussle for Hougoumont raged on for hours, and the diversion became a key part of the battle. Back in the centre, Napoleon believed that the artillery attack had gone on long enough, and sent in his infantry led by d'Erlon. The French general had faced Wellington before in the Peninsular War and was determined to have the better of him this time around. His assault began well, as he took La Haye Sainte and forced a retreat.

As the French moved further forward, they engaged the core of the coalition forces. Wellington's line was thinly spread and Napoleon hoped that this forward punch would split the allied forces and clear the way to Brussels. The French had the upper hand, but they hadn't counted on a mass counterattack led by the Earl of Uxbridge's heavy cavalry. 2,000 horses clashed with the infantry and sent them running back. The sudden and effective strike had evened up the battle but, as Napoleon readied his artillery and his own cavalry, the pendulum was about to swing again.

Below: In warfare from this era, fighting for and winning the enemy standard was a major part of the conflict, able to boost or decimate morale depending on which side seized the standard and which side lost it.



1 THE HOUGOU MONT FARMHOUSE

Napoleon's first objective is to take the small compound at Hougoumont. Lightly defended by only a few allied companies, a mass infantry attack is repulsed just as the men in the courtyard near breaking point.

2 THE MAIN ASSAULT

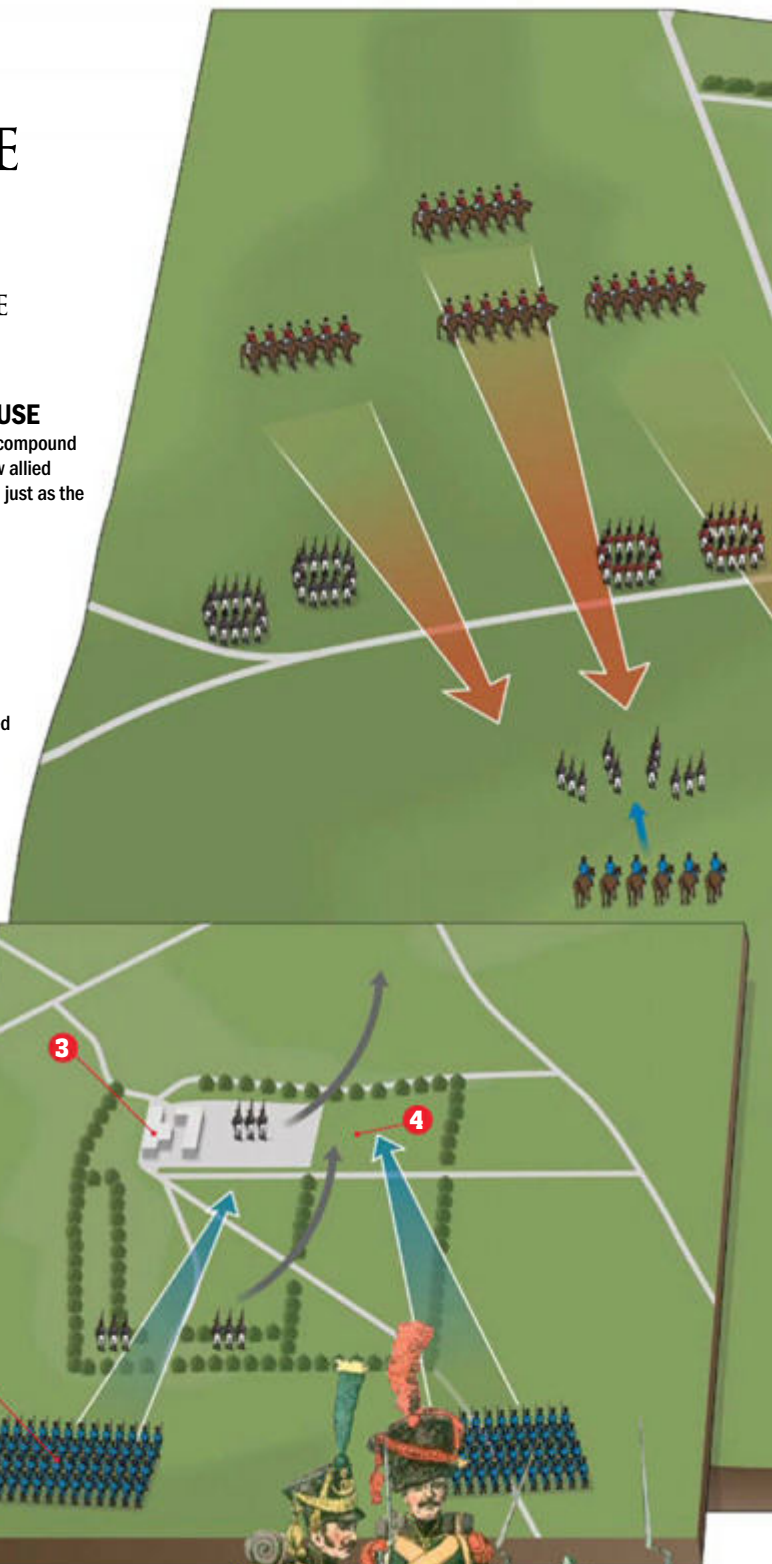
The Grande Batterie lines up in the middle of the field and fires countless bursts of round shots at the opposing ranks. The relentless bombardment lasts for two hours and the allied lines are peppered with cannon shot.

3 THE DIVERSION BECOMES A MASS BATTLE

The French army is determined to take Hougoumont. It believes that if they do, Wellington's reserves will be drawn towards it and leave his centre exposed. Napoleon's brother Jerome commands the attack on the farmhouse; he is eager to prove his worth.

4 RESOLUTE COALITION DEFENCE

The two-metre wall that surrounds the compound is stubbornly defended by the British, who fire their muskets and rifles through any gaps in the wall they can find. Despite wave after wave of Frenchmen, Hougoumont is still in allied hands.

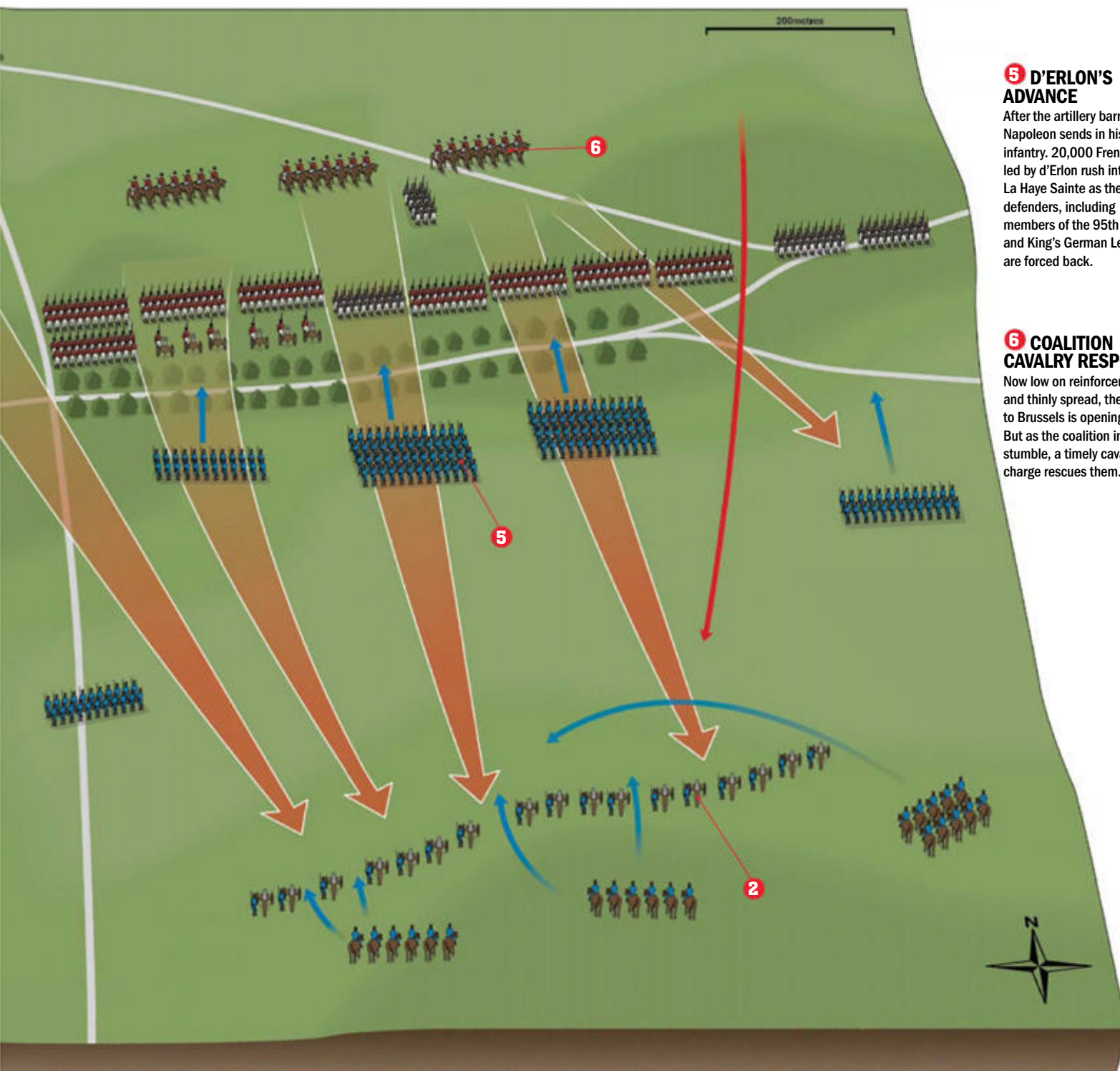


INFANTRY SKIRMISHERS

THE COALITION FORCES WERE BOLSTERED BY SPECIALISED TROOPS, ABLE TO FIGHT AND MOVE MORE INDEPENDENTLY

Waterloo wasn't the only concern for the British in the summer of 1815. They had only recently been fighting in the War of 1812 and, as a result, some of the best units in the army were still stranded in the United States.





5 D'ERLON'S ADVANCE

After the artillery barrage, Napoleon sends in his infantry. 20,000 Frenchmen led by d'Erlon rush into La Haye Sainte as the defenders, including members of the 95th Rifles and King's German Legion, are forced back.

6 COALITION CAVALRY RESPONSE

Now low on reinforcements and thinly spread, the road to Brussels is opening up. But as the coalition infantry stumble, a timely cavalry charge rescues them.

Acute Graphics



Above: A British pattern Baker Rifle 1805. These rifles were far more accurate than standard-issue muskets and were favourites of light infantry skirmishers

To fill the gaps left by them, the coalition utilised the use of mercenary units from several German states. These troops, most from Brunswick, Nassau and Hanover, had served the British with distinction in the Peninsular War and had signed up once

Left: Light infantry from the German city state of Nassau. During the battle, Nassau infantry were stationed in Hougoumont alongside British Guardsmen

again to fight against the First French Empire. The majority of the 95th Rifles Regiment also served at Waterloo. These jaegers and skirmishers were Wellington's trump card. Wielding Baker Rifles rather than smoothbore muskets, these elite corps would fight in open order and were among some of the best marksmen of the era. Napoleon was always slightly hesitant to employ rifled battalions and still believed the faster-to-reload musket was king, so the Grande Armée only had one regiment of Tirailleur skirmishers in its ranks. The British tactic of laying low behind ridges and

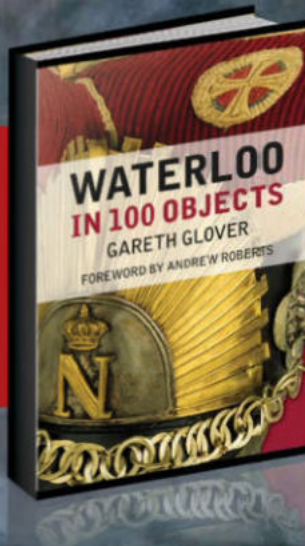
in farmhouses favoured the use of accurate marksmen; they were the eyes and ears of the allied army. Using cover, they harassed the flanks of the French columns to great success. The defence of Hougoumont, La Haye Sainte and Papelotte was greatly aided by the Nassau regiments and the King's German Legion.

Supplementing the British guard, the stoicism of these battalions helped hold the French infantry back and they only stopped fighting when they ran out of ammunition. For many, the victory was as much German as it was British.

WATERLOO IN 100 OBJECTS

Waterloo In 100 Objects by Gareth Glover is available from The History Press and features just a few of the fantastic artefacts seen here. Visit www.thehistorypress.co.uk for more information.

The scale of the conflict can be seen in this oil on canvas painting of the Battle of Waterloo by Sir William Allan



**“WELLINGTON HAD NOW LOST THIS CRUCIAL CENTRE AND
THE FRENCH GUNS WERE ABLE TO MOVE UP TO WITHIN
DEADLY RANGE OF THE BRITISH POSITION – VICTORY OR
DEFEAT WAS STILL VERY MUCH HANGING BY A THREAD”**



WATERLOO'S CAVALRY

COURAGEOUS CHARGES AND LETHAL MANOEUVRES TURNED THE TIDE OF THE BATTLE MORE THAN ONCE

With Uxbridge's cavalry sweeping across the battlefield, many over-running towards the French lines, the French cuirassiers, considered the elite heavy cavalry of the day, prepared their counter-charge. The result was catastrophic for the British mounted troops, who were utterly destroyed by the fresh French cavalry. Many found themselves pursued as they desperately spurred on their spent horses towards friendly lines, but were cut

Below: A shako cap belonging to a member of the Brunswick Hussars. The skull and cross bones was a symbol of mourning for the late Duke of Brunswick



down either by sabres or lethally effective lances. More than once during the day it was the French lancers who got the best of their British rivals in one-on-one combat, with the weapon's extra reach providing a devastating advantage.

After this exchange of slaughter, with the remnants of the British cavalry gathering back behind its own lines and d'Erlon still attempting to rally his scattered men, a lull broke out across the battlefield as both sides took stock. Further to the west the fight for Hougomont still raged, with infantry and artillery attacks battering the building relentlessly.

At about 4pm, Marshal Ney gathered his cavalry together and prepared them to charge up and over the hill. The German garrison of La Haye Sainte would have seen the terrifying cuirassiers and Chasseurs a Cheval speed past on their way up the ridge. Nervously taking stock of their dwindling ammunition, they knew they could not hold this crucial position much longer without support. As the gleaming armour of the French appeared on top of the ridge, Wellington bellowed to his men: "Prepare to receive cavalry!"

"THE RESULT WAS CATASTROPHIC FOR THE BRITISH MOUNTED TROOPS, WHO WERE UTTERLY DESTROYED BY THE FRESH FRENCH CAVALRY"

Right: The cuirass breastplate of Carabiner Francois Fauveau, who was killed when a cannonball struck him in the chest, passing straight through the young man's body



UXBRIDGE'S CHARGE

HOW THE BRITISH CAVALRY SWEEPED AWAY THE FRENCH ADVANTAGE

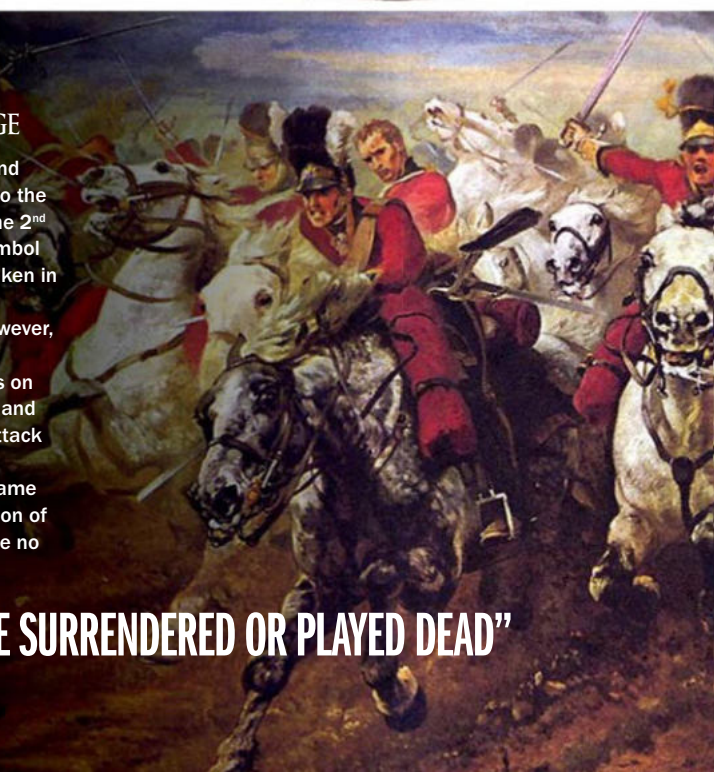
With d'Erlon's infantry mounting the ridge ahead of the coalition position, Sir Thomas Picton attacked the fatigued French with his own reserve units. Wellington's entire centre was in danger of folding under the sheer mass of 20,000 infantrymen in columns. Uxbridge, seeing the danger, moved his entire cavalry corps forward into line and ordered the charge. The Household and Union brigades, numbering about 2,000 sabres, charged at quick pace, rather than an outright gallop, through the British lines and into d'Erlon's men.

The French infantry were completely routed, with the troops scattering frantically back down the ridge towards their lines. Hundreds were killed as they ran and hundreds more surrendered or played dead. The charge of the Scots Greys was

simultaneously one of the most successful and tragic of the whole engagement. Crashing into the French 45th line, Sergeant Charles Ewart of the 2nd Dragoons captured an imperial eagle, the symbol of the regiment. Only two such prizes were taken in this way during the battle.

Drunk with the success of their charge, however, the dragoons and many others in Uxbridge's charge continued on towards the French guns on the opposite slope. With their horses winded and cut off from any infantry support, a counterattack by French cuirassiers devastated the British cavalry, which descended into panic and became scattered in the mud and chaos. Only a fraction of the coalition cavalry remained and would take no further significant part in the battle.

"HUNDREDS WERE KILLED AS THEY RAN AND HUNDREDS MORE SURRENDERED OR PLAYED DEAD"





"CAVALRY PROVIDED THE EYES AND EARS"

PROFESSOR BRUNO COLSON ON CAVALRY TACTICS AND HOW A WELL-TIMED CHARGE COULD PROVE THE DIFFERENCE BETWEEN VICTORY AND CATASTROPHE

WHAT WERE THE ESSENTIAL DIFFERENCES BETWEEN THE COALITION AND FRENCH CAVALRY?

The British cavalry had two components: the Household regiments, with heavy men on heavy horses, and the dragoons regiments, with dragoon guards and heavy and light dragoons. Hanoverian, Dutch-Belgian and Brunswick units included a majority of light regiments but also some heavy (carabineer) regiments. No cavalry wore armour or carried lances in Wellington's army at Waterloo.

The French had more types of cavalymen, equally divided into heavy and light regiments. The most numerous were the cuirassiers regiments: elite troops on powerful horses. They had longer swords than their British counterparts and this proved deadly at Waterloo. The Prussians had no heavy cavalry and a majority of their regiments came from the militia (Landwehr). A lot of them were armed with lances.

The British system had only one officer in front, the others being within the ranks. This was not conducive to forward control and was one reason the British Union Brigade was not able to rally after dispersing d'Erlon's French Infantry. In the French and Prussian cavalries, five officers were out in front, guiding the direction and speed of their men.

DID FRENCH CAVALRY OFFICERS ENJOY A CERTAIN AMOUNT OF FREEDOM IN THE RANKS?

At Waterloo, Marshal Ney was put in command of the attacks by Napoleon, so he was authorised to launch his great cavalry charges around 4pm, even if the emperor judged it was premature.

The French were the first to have a strong cavalry reserve. Some said this hampered cooperation with infantry. There were instances in the Waterloo campaign when a French infantry general didn't want to obey a cavalry general. This happened quite frequently, pointing to jealousy and mistrust between cavalry and infantry.

WHAT ROLES DID CAVALRY UNITS HAVE OFF THE BATTLEFIELD?

Light cavalry provided the eyes and ears of the army, on the move and on the battlefield. It was used to reconnoitre, patrol, screen, skirmish, provide outposts and seek intelligence. Napoleon formally prohibited the use of cuirassiers for such tasks – too heavy and too expensive. They were reserved for shock actions on the battlefield.

HOW WERE CAVALRY UNITS ABLE TO CO-ORDINATE WITH INFANTRY UNITS EFFECTIVELY?

Like the infantry, cavalry units normally achieved their best results in combination with guns. It also had to be supported by infantry to be able to hold ground it conquered. Artillery and infantry followed the horsemen and plunged into the breach created.

Such a co-ordinated attack was brilliantly orchestrated by the French at the Battle of Ligny. At Waterloo, however, this co-ordination was badly organised by the French. Ney's famous cavalry charges were not followed by infantry.

On the allied side, as his posture was defensive, the Duke of Wellington removed most of his Royal Horse Artillery batteries from his cavalry formations to place them in a static role. Uxbridge's charge was timely in relieving the Anglo-allied infantry.

HOW DID NAPOLEON DEPLOY HIS CAVALRY TO TAKE FULL ADVANTAGE OF THEIR ABILITIES?

Napoleon really put the emphasis on his heavy cavalry and used it as a reserve force able to exploit every opportunity to break the enemy front during a battle and to pursue a broken adversary. For that purpose he had massive formations of cuirassiers, from 3,000 to 10,000.

The emperor also had a 'master of the cavalry' able to lead this massive force into battle. The allies didn't launch such massive cavalry charges.

HOW WAS THE INFANTRY SQUARE FORMATION DEVELOPED TO TAKE ON CAVALRY, HOW EFFECTIVE WAS IT AND WHAT DID CAVALRY UNITS DO TO TRY TO BREAK SQUARE FORMATIONS?

At Waterloo, the Duke of Wellington had formed his infantry battalions in small columns able to quickly form into squares. Actually, most of them were oblong squares. They were four ranks deep and not a single one was penetrated by French cavalry.

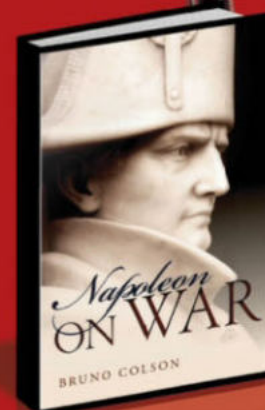
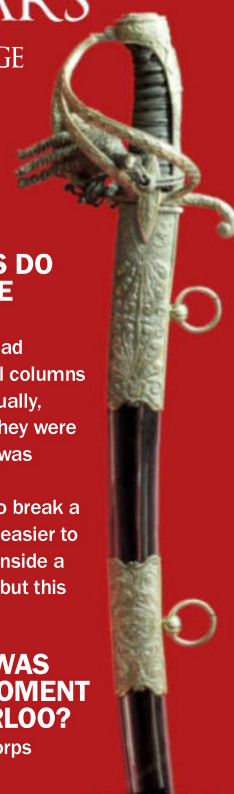
The only hope for the cavalymen to break a square was to exploit a gap generally easier to find at an angle. Once horsemen got inside a square it was all over for the infantry, but this did not happen at Waterloo.

IN YOUR OPINION, WHAT WAS THE MOST IMPORTANT MOMENT OF THE BATTLE OF WATERLOO?

For me, this was when the French I Corps reached the crest of Mont St Jean and was in position to break the Anglo-allied centre, around 2pm. This was the moment when Napoleon could have won the battle.

The counterattack by Picton's division and Uxbridge's cavalry charge turned the tide. There are still controversies over the French formation, but this was not necessarily inadequate.

Right: Professor Bruno Colson's book, Napoleon On War, is available from Oxford University Press, priced £27.99



The ill-fated charge of the Scots Greys resulted in the French 45th Line's eagle being captured

BRITISH SQUARES UNDER ATTACK AND THE ARRIVAL OF THE PRUSSIANS

WITH THE FRENCH STILL IN THE ASCENDENCY, THE COALITION SOLDIERS HAD A CHOICE: HOLD OUT AGAINST A SUSTAINED OFFENSIVE OR BE SLAUGHTERED

As his cavalry disappeared over the ridge to attack the British squares, Napoleon may have heard the well-timed salvo from Captain Mercer's cannons as they stood firm against Ney's charge. Deadly case shot launched out into the horses, blunting the charge significantly. Many horses were taken down from under their riders, but the French kept coming as the British infantry fixed their bayonets, kneeled, and braced for impact.

At almost the exact time Ney launched his charge, the Prussians arrived on the battlefield. After a gruelling 12-hour march from Wavre, Blücher had kept to his word, and he and 50,000 men were ready to enter the fray. Outnumbering the French three to one, the full might of the Prussian force ploughed into Napoleon's right flank in the village of Plancenoit. It was left to the French commander Lobau to repel this black-shirted enemy who were eager to avenge their defeat at Ligny.

Back in the centre of the field, General Kellerman and 3,500 lancer cavalry had come to the aid of Ney, with their long blades to thrust into the allied soldiers before they could raise their bayonets. This destruction went on for two hours as a cycle of constant artillery fire and cavalry hit Wellington's men. Some companies, like the Cumberland Hussars, lost their resolve and fled the bloodbath. The vast majority of coalition troops held firm though, and with each charge the French attacks were losing their potency.

The charge was called off at 6pm after the loss of life became too much. Napoleon's infantry and artillery had failed to adequately support the cavalry and the offensive was a costly failure. Despite their comrades successfully defending against the cavalry behind the ridge, the garrison of La Haye Sainte had reached breaking point and was forced to withdraw. Wellington had now lost this crucial centre and the French guns were able to move up to within deadly range of the British position – victory was still hanging by a thread.

Below: Part of Kellerman's forces were made up of lancer regiments, who countered allied bayonets with long lances



1 FRENCH CAVALRY ASSAULT

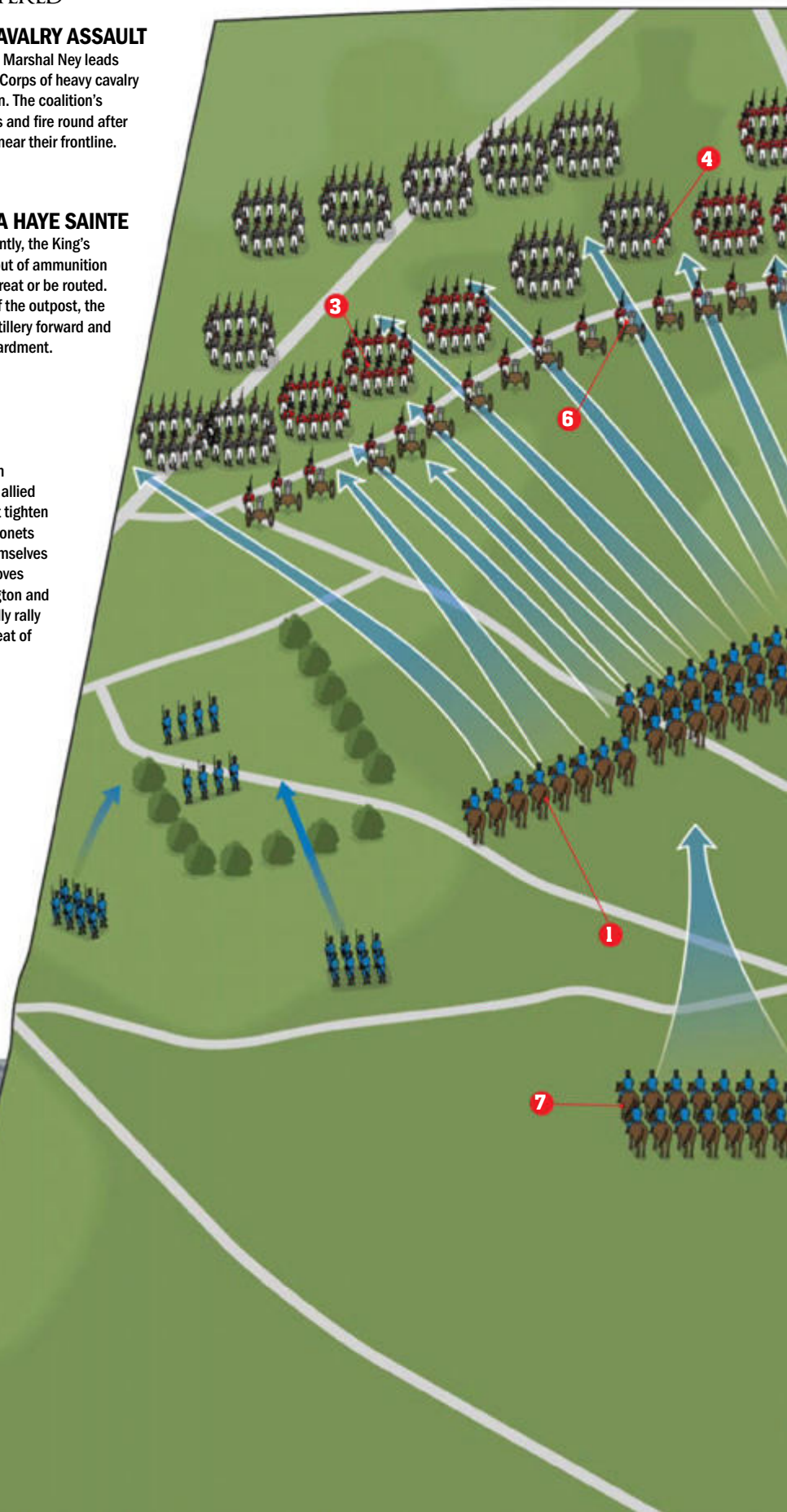
Seizing the initiative, Marshal Ney leads Milhaud's IV Cavalry Corps of heavy cavalry into the allied column. The coalition's battalions raise arms and fire round after round as the horses near their frontline.

2 LOSS OF LA HAYE SAINTE

After defending valiantly, the King's German Legion run out of ammunition and are forced to retreat or be routed. Now in occupation of the outpost, the French move their artillery forward and continue their bombardment.

3 SQUARE FORMATION

To combat the French cavalry advance, the allied battalions on the left tighten to form squares. Bayonets fixed, they brace themselves as the thunder of hooves draws closer. Wellington and his officers continually rally their troops as the heat of the battle escalates.



4 "PREPARE TO RECEIVE CAVALRY!"

The French cuirassiers arrive at the coalition lines and are surprised at how little effect the artillery has had. Close knit and strong, the allied ranks repel the 8,000 horsemen, and so begins one of the bloodiest stages of the battle.

5 COMING OF THE PRUSSAINS

As the clock strikes four, black-uniformed figures appear on the east of the battlefield. It is the Prussians. Lobau is sent over to engage the new arrivals as the vengeful Prussians smash into the right flank.

6 CAPTAIN MERCER'S ARTILLERY BARRAGE

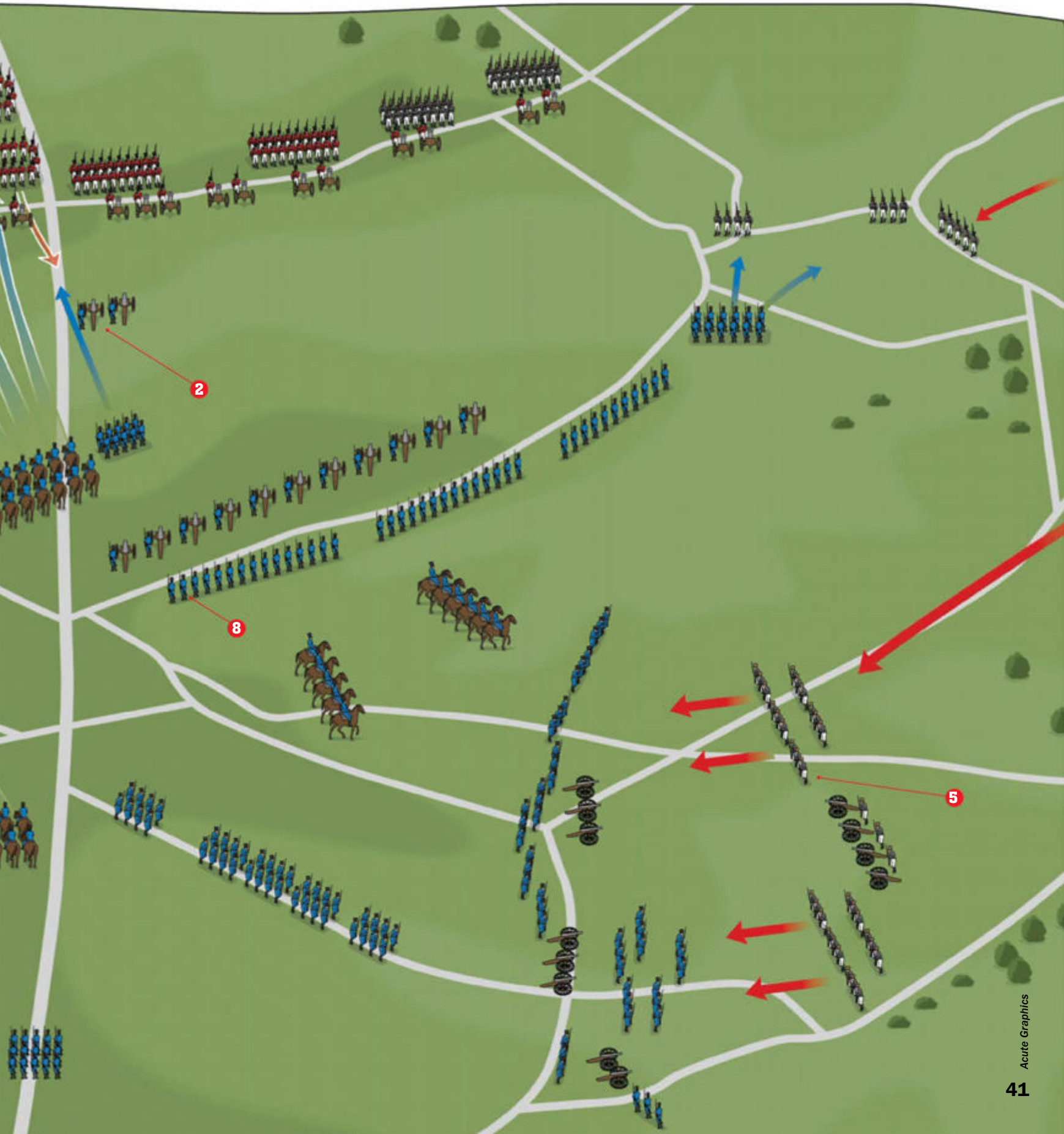
Led by Captain Alexander Mercer, canister shots are sent into the horsemen. At this point, the French artillery fire once again and are joined by 3,500 fresh horses led by General François Kellerman.

7 FAILED OFFENSIVE

Armed with lancers, Kellerman's riders lay siege to the squares but as the allies continue to hold firm, each subsequent attack loses ferocity. At 6pm, Ney is forced to call off the offensive.

8 TURN OF THE TIDE

Despite the onslaught, Wellington's right flank holds firm and now with Prussian aid, Napoleon is forced to play his final card. With only a few hours of daylight left, the French Imperial Guard are sent in.



PRUSSIANS AND FALTERING ARTILLERY: THE BEGINNING OF THE END

AFTER THE MASS FRENCH OFFENSIVE FAILED, THE PRUSSIANS LAID SIEGE TO NAPOLEON'S RIGHT FLANK, OPENING UP A SECOND FRONT

Napoleon had begun his military career serving in artillery units, and as such many of his battlefield decisions were based around the awesome power of his Grande Batterie. At Waterloo, however, the cannons that had been so devastating across Europe were simply not the well-oiled units they once were.

Nonetheless, through the cover of the French cavalry and with La Haye Sainte finally taken, the French guns could make their way closer to the British positions. In a terrifying onslaught, the 27th Regiment of Foot, the Inniskilling, was almost wiped out.

Meanwhile, over in the village of Plancenoit, the Prussians were battering down the French right flank. Lobau and his units were fiercely defending the village but were slowly being pushed back due to the sheer weight of Prussian numbers. It was now a race against time. Napoleon had to defeat Wellington before Blücher punched a hole in his right flank.

With Lobau fending off the Prussians, the French had lost almost 10,000 men that could have been utilised against Wellington's tiring forces. With several units of Imperial



Above: The mainstay of the Grande Batterie were six-pounder guns like this one. This particular cannon was captured at Waterloo by the coalition

Guard committing to defend against the Prussians, the fight for the village became yet another bitter struggle.

Right: Cannonballs littered the battlefield at Waterloo. This projectile is from an 18-pounder cannon



THE GRANDE BATTERIE ✕

THE STRONGEST FORCE OF CANNON IN THE WORLD, NAPOLEON FIRMLY BELIEVED THAT ARTILLERY WAS THE KEY TO WINNING BATTLES

The 250 French guns at Waterloo could fire round shots farther than one kilometre (0.6 miles) and were part of the French Gribeauval and Year XI systems that pioneered the use of light artillery. Each brigade of the Imperial Guard had a six-pounder foot battery while every cavalry brigade had a mobile six-pounder horse battery. Each battery consisted of between four to six guns and two howitzers operated by 80-150 men.

Throughout his military career, Napoleon used artillery in an attacking capacity,

battering the enemy before sending in the cavalry and infantry to finish the job. His request on 18 June was "to astonish the enemy and shake his morale."

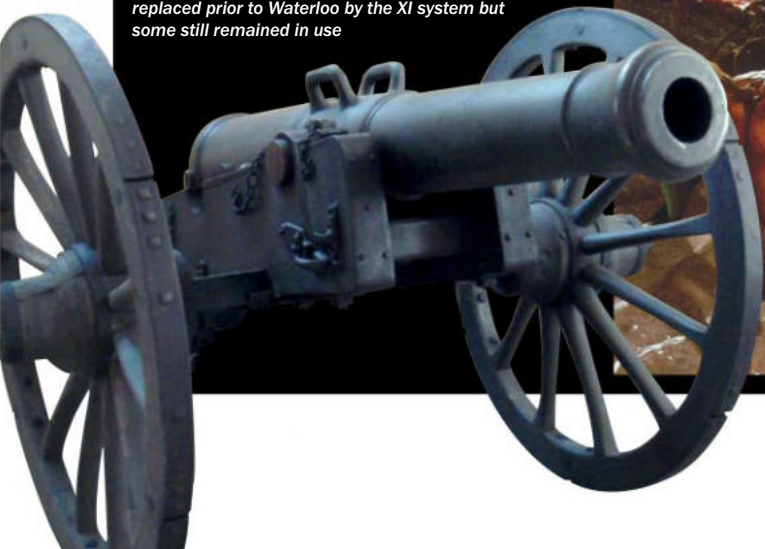
Overconfident, the emperor deviated from his standard tactic at Waterloo, sending in his troops before the artillery had completed its job. The late start also affected the French, as if the cannons had begun firing earlier, the coalition may have been knocked out before the Prussians arrived. Despite the late start, the cannons still shook the resolve of the allies.

The French guns fired, on average, 120 shots per minute, outperforming Wellington's artillery as his caissons were hit and set on fire. During the battle, Napoleon was unable to co-ordinate his cavalry with his artillery. This was a grave mistake as both the brave cavalry charges and the destructive artillery barrages were put to waste. As a result, coalition infantry squares were able to hold their ground and the cavalry failed to get among them with their lances and sabres.

"OVERCONFIDENT, THE EMPEROR DEVIATED FROM HIS STANDARD TACTIC AT WATERLOO, SENDING IN HIS TROOPS BEFORE THE ARTILLERY HAD COMPLETED ITS JOB"

Below: 12-pounder Gribeauval cannons were used extensively by Napoleon in warfare. They were replaced prior to Waterloo by the XI system but some still remained in use

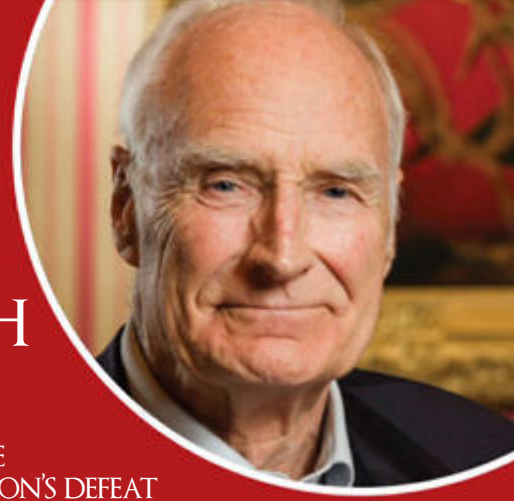
The French army depicted crossing the Sierra de Guadarrama in the Peninsular War





“THEY CAUSED A HUGE AMOUNT OF DEATH AND DESTRUCTION ON THE ALLIED SIDE, BUT NOT AS MUCH AS THEY SHOULD HAVE DONE”

HISTORIAN AND BROADCASTER PETER SNOW ASSESSES THE EFFECTIVENESS OF THE GRANDE BATTERIE AND HOW ITS MISMANAGEMENT CONTRIBUTED TO NAPOLEON'S DEFEAT



HOW EFFECTIVE WAS THE FRENCH ARTILLERY DURING THE BATTLE?

The artillery was well used by both sides. Napoleon had 250 guns, Wellington 150. However, the emperor used his guns rather inefficiently. They caused a huge amount of death and destruction on the allied side but not as much as they should have done. One reason for this was that they were firing in muddy and rainy conditions after the terrible night of 17 June. When the cannonballs were shot they would land with a plonk and not bounce forwards. Also, the French couldn't really see the British and allied units behind the ridge, so didn't know exactly where to fire.

The third problem Napoleon had was that when firing at the British positions, he failed to destroy the two most important parts of the defence – the farms at Hougomont and La Haye Sainte. Both survived almost unscathed, although the roof at Hougomont was burned off. He failed to land a round shot anywhere near these farms, which made it much more difficult for the French to break in. They never broke into Hougomont and only made it into La Haye Sainte at 6pm, when it was too late to make any difference to the battle.

HOW DID DIFFERENT TYPES OF ARTILLERY WORK TOGETHER?

They had to judge what kind of rounds to fire off in different situations. If you were bashing down walls

of farms, as Napoleon should have been trying to do, you would use round shots, but they weren't used very often against the farms. Because of the mud, the round shot was less effective than it could have been.

Canister shots were effective at no more than 150-200 metres (492-656 feet) as they were like firing a shotgun with lots of little musket ball rounds, which were terribly effective against infantry or indeed approaching cavalry. There was also shrapnel, which the British were very keen on. It was a round shot with a charge inside that blew up the shot as it arrived at the target. This was very effective against infantry.

WERE THE CONDITIONS ON THE DAY POOR FOR ARTILLERY?

Even though Napoleon failed to get his guns up to start the battle at dawn, he still got them there. It was an extraordinary feat when you think how they dragged those guns up to the frontline in that appalling weather. It was something like 15 miles from Quatre Bras to Waterloo and the farms on

the southern side of the Waterloo ridge. Moving the guns in those conditions must have been extremely difficult.

COULD NAPOLEON HAVE WON IF HE HAD MORE AMMUNITION?

I don't think it would have made a big difference. The crucial failure of Waterloo was not using the artillery against the buildings, which were so critical to Wellington's defence. More rounds and more hits could have made a difference but the fundamental problems were still there – the mud and that they couldn't see their targets behind the ridge. The battle was largely lost by the weather.

IN YOUR OPINION, WHAT WAS THE MOST IMPORTANT MOMENT OF THE BATTLE OF WATERLOO?

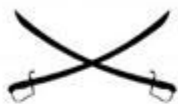
I think the most important moment of the battle, undoubtedly, was when von Bülow's Prussians were able to seriously engage the French right wing at Plancenoit. There is no doubt in my mind that Napoleon's need to divert ten battalions of the Imperial Guard was a distraction to his determination to break through Wellington's line, so he had to deviate from his plan to bust through the centre. Nearly half of the Imperial Guard were sent to the right to keep off the Prussians and helped decide, or in fact decided, the failure of Napoleon to win at Waterloo.

“THE FUNDAMENTAL PROBLEMS WERE STILL THERE – THE MUD AND THAT THEY COULDN'T SEE THEIR TARGETS BEHIND THE RIDGE. THE BATTLE WAS LARGELY LOST BY THE WEATHER”



THE BATTLE OF WATERLOO EXPERIENCE

Full of vivid accounts, astonishing imagery and engrossing source material, *The Battle Of Waterloo Experience* by Peter and Dan Snow is published by Andre Deutsch and priced at £30.



THE FINAL ATTACK AND AFTERMATH

WITH THE BATTLE SLIPPING AWAY, NAPOLEON SENT HIS BATTALIONS OF MIDDLE AND OLD IMPERIAL GUARD TO CRUSH WELLINGTON'S LINE

As the fight for Plancenoit raged on, with bitter street fighting inflicting terrible losses on each side, at about 7.30pm Napoleon ordered the remainder of his Imperial Guard to attack Wellington's centre. Made up of about 6,000 fresh troops from the Middle and Old Guard, and supported by artillery fire, the unit marched up the slope between Hougomont and La Haye Sainte. Facing them were two British brigades: the Guards under Major-General Maitland and the 5th Brigade under Major-General Halkett.

As the bearskins of the Imperial Guard appeared over the brow of the ridge, the British troops levelled their muskets and fired a volley, cutting deep into the first ranks of advancing troops. After a rapid exchange of fire, however, the British line began to falter, and Major Halkett was hideously wounded by a musket ball straight through his mouth. Just as it seemed the Imperial Guard was about to break through, a Dutch-Belgian unit positioned in reserve advanced and fired on the enemy, halting their advance and rallying the British. Meanwhile, Maitland's brigade had managed to push back unassisted, unleashing all 1,500

muskets on the French in quick succession as they mounted the ridge.

With their muskets empty, Maitland then ordered them to fix bayonets and charge at the enemy. Startled by the sudden and deadly volley fire, as well as the screaming line of red rushing towards them, the Imperial Guard hesitated. As the two sides clashed, and flanking fire from another British unit began to chop away at the ranks of Guard still advancing, the cry went up: "La Garde recule!" Napoleon's elite Guard was forced back down the slope it had just marched up.

Wellington shortly sounded the general advance of his army after the fleeing French, crying: "No cheering lads, but forward and complete your victory!" The shouts of relief and elation from the pursuing British ranks mingled with the desperate cries of the fleeing French.

Meanwhile, the Prussian force at Plancenoit finally prevailed and Blücher's men led the bulwark of the relentless chase. A vengeful orgy of slaughter ensued, as no quarter was given by the Prussians to those surrendering or even the wounded.

As Napoleon raced back to France in his carriage, his Imperial Guard fought on in defiant squares to cover the retreat of

its emperor. General Cambronne, the Guard commander, reportedly told the coalition:

"The Guard dies, but does not surrender." Later, Wellington and Blücher famously met at the inn La Belle Alliance, which that very morning had been at the centre of Napoleon's position. Reflecting on the events of the battle, Wellington would say that it was "the nearest run thing you ever saw in your life."

With the battle and his army lost, Napoleon shortly abdicated and surrendered to the British, who exiled him once again, this time to the island of St Helena, where he saw out the remainder of his days.



Right: This is the skull of John Shaw, one of the most imposing soldiers in the coalition. Over six-foot tall, he perished on the battlefield after he was surrounded by nine cuirassiers

Napoleon seen about to depart in his carriage, as his men desperately retreat around him



MORE ON NAPOLEON'S LAST BATTLE IN
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THE BIRTH OF THE SAS

WORDS GAVIN MORTIMER

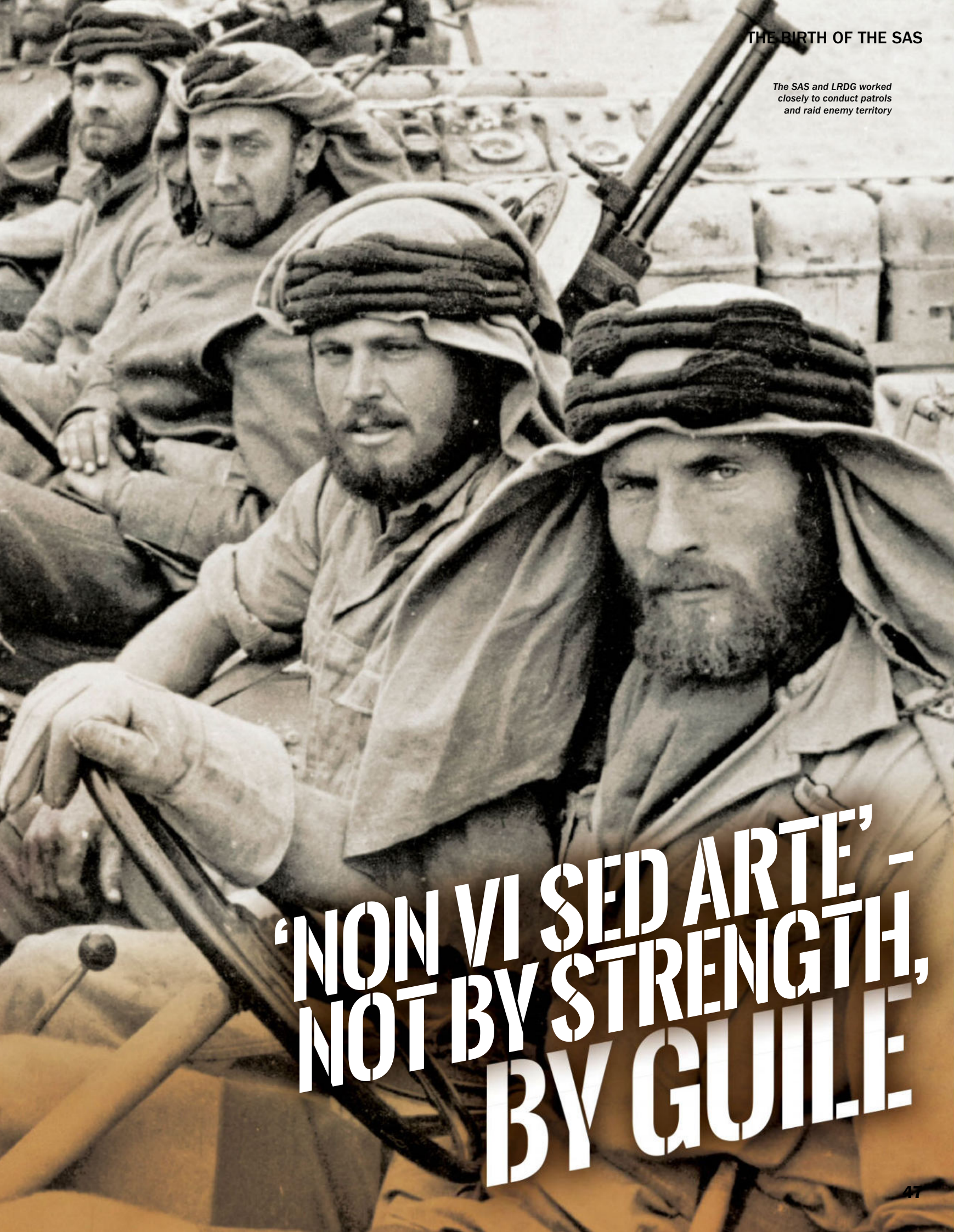
In the wasteland of North Africa, Britain's Long Range Desert Group took the fight to the Axis forces alongside a fledgling special forces unit

Ralph Bagnold was as unlikely a special forces commander as anyone could imagine. His war had been the Great War, when as a junior signals officer he had survived the carnage of the Western Front. When World War II began in September 1939, Bagnold was 43 and earning a comfortable living as a scientist and writer.

Recalled to the colours four years after he had retired from the army, Major Bagnold was posted to Officer Commanding, East Africa Signals, and dispatched on a troopship to Kenya. But he never arrived. In early October, Bagnold's vessel, RMS Franconia, collided with a merchant cruiser in the Mediterranean. He

and the rest of his troop transferred to another vessel and sailed to Port Said in Egypt to await the first available ship to Kenya.

Bagnold was delighted. Egypt was a country he knew well, better in fact than nearly any other Briton. He had spent most of the 1920s in Egypt with his regiment, entranced by the culture and the vast desert that stretched west into Libya. In 1927, he made his first foray into the Libyan desert, leading a small band of explorers in a fleet of Model T Fords. More expeditions followed, penetrating farther into the desert's brutal interior than any other European had. Bagnold's fascination was as much motivated by science as by exploration,



THE BIRTH OF THE SAS

The SAS and LRDG worked closely to conduct patrols and raid enemy territory

**'NON VI SED ARTE' -
NOT BY STRENGTH,
BY GUILE**

THE BIRTH OF THE SAS

and he began studying the terrain, leading him to publish the critically acclaimed *The Physics Of Blown Sand And Desert Dunes* in 1939.

Back in Egypt, Bagnold took the train from Port Said to Cairo to look up old friends. He dined with one such acquaintance in the restaurant of the exclusive Shepherd's Hotel, where he was spotted by the gossip columnist of *The Egyptian Gazette* newspaper. A few days later, the word was out that Bagnold was back in town, and within a matter of days he was summoned to the office of General Archibald Wavell, General Officer Commanding-in-Chief of Middle East Command.

Wavell pumped Bagnold for information on the accessibility of the Libyan Desert – the general was increasingly concerned by intelligence reports that the Italians had as many as 250,000 men in 15 divisions under Marshal Rodolfo Graziani. So impressed was he by what Bagnold told him that Wavell arranged for his permanent transfer to North Africa.

Bagnold's vision brought to life

Bagnold was sent to Mersa Matruh – 135 miles west of Cairo – where he discovered that the most up-to-date map the British forces possessed of Libya dated from 1915. He was similarly appalled by the indifference of senior officers to the threat posed by the Italians – they believed the enemy would make a full-frontal attack on Mersa Matruh, which they would easily repel, but Bagnold suspected the Italians, some of whom he had encountered during his expeditions of the 1920s, would launch surprise attacks on British positions in Egypt from further south.

Bagnold's idea was to form a small reconnaissance force to patrol the 700-mile frontier with Libya. This was rejected, as it was when he submitted it again in January 1940, and the following month Bagnold was posted as a military advisor to Turkey, presumably to give Middle East Headquarters (MEHQ) in Cairo some peace and quiet.

But Bagnold wouldn't give up, and after Italy declared war on Britain on 10 June 1940,



LRDG soldiers had to dress to stay cool in the heat of the desert

he tried for a third time to convince the top brass of his idea, explaining in an additional paragraph that there would be three patrols: "Every vehicle of which, with a crew of three and a machine gun, was to carry its own supplies of food and water for three weeks, and its own petrol for 2,500 miles of travel across average soft desert surface... [each] patrol to carry a wireless set, navigating and other equipment, medical stores, spare parts and further tools."

This time Bagnold entrusted his friend, Brigadier Dick Baker, to ensure the proposal was put directly into the hands of Wavell. Baker obliged and within four days of receiving Bagnold's proposition, Wavell had authorised him to form the new unit, provisionally entitled the Long Range Patrol (LRP).

Wavell was a hard taskmaster, however, giving Bagnold just six weeks to make his vision a reality. Men, equipment, rations, weapons, vehicles... it was a formidable challenge but

one that Bagnold rose to. First, he searched for the soldiers; he tracked down most of his old companions from his exploration days, and while one or two were unable to secure a release from their military duty, Bagnold was soon joined in Cairo by Bill Kennedy-Shaw and Pat Clayton, who by 1940 had accumulated nearly 20 years of experience with the Egyptian Survey Department. Also recruited to the new unit was captain Teddy Mitford, a relative of the infamous sisters and a desert explorer in his own right during the late 1930s.

While Clayton, Mitford and Kennedy-Shaw started to hunt down the necessary equipment, Bagnold flew to Palestine on 29 June to see Lt-General Thomas Blamey, commander of the Australian Corps. Bagnold requested permission to recruit 80 Australian soldiers, explaining that in his view Australians would be the Allied soldiers most likely to adapt quickest to desert reconnaissance. Blamey, on the orders of his government, refused, so Bagnold turned to the New Zealand forces in Egypt.

This time he met with success, and 80 officers, non-commissioned officers and men from the New Zealand Divisional Cavalry Regiment and Machine-Gun Battalion volunteered to be part of the LRP. Bagnold took an instant shine to the Kiwis, saying: "They made an impressive party by English standards. Tougher and more weather-beaten in looks, a sturdy basis of sheep-farmers, leavened by technicians, property-owners and professional men, and including a few Maoris. Shrewd, dry-humoured, curious of every new thing, and quietly thrilled when I told them what we were to do."

July was spent assembling the vehicles and equipment and training the New Zealanders in the rudiments of desert motoring and navigation. Kennedy-Shaw, appointed the unit's intelligence officer, told the Kiwis that the Libyan Desert measured 1,200 miles by 1,000 – or put another way, was roughly the size of India. It was bordered by the Nile in the east and the Mediterranean in the north. In the south, which was limestone compared to the

AT WAR WITH BAGNOLD

IN JANUARY 1941 BAGNOLD RECRUITED HIS FIRST EIGHT MEMBERS INTO THE NEWLY-FORMED YEOMANRY 'Y' PATROL, NICKNAMING THEM HIS 'BLUE-EYED BOYS', BECAUSE THEY WERE THE CREAM OF THE CROP

Lance-corporal Stuart Carr, nicknamed 'Lofty' because he stood at six foot five inches, joined the Long Range Desert Group in January 1941 from the North Staffordshire Yeomanry, then based in Palestine. Recruited by Ralph Bagnold on account of his superb orienteering skills, the 20-year-old Carr became one of the unit's top navigators.

Despite the fact that Ralph Bagnold was a senior officer old enough to be Carr's father, the 20-year-old lance-corporal hit it off with the LRDG's commanding officer from the start. "The bond I formed with Bagnold was spontaneous; we just got on together," reflects Carr, now 94 and the last surviving member of the original Y Patrol. "He liked my callowness. Once we were having a discussion about whether navigation was art or science, and I said it's the art of getting lost scientifically. He liked that." Carr, reared in the West Country, as was Bagnold, was a natural

at navigation and swiftly rose to become one of the LRDG's three First Navigators. In the early summer of 1941 he frequently drove Bagnold from Cairo to the town of Kharga (375 miles south of the Egyptian capital) to a series of meetings with local headmen who passed on information on enemy movements given to them by their tribesmen. "Bagnold and I used to muse a lot," says Carr. "He told me that when you're faced with a problem, you begin by discarding the first three solutions and then you start thinking of ways to solve the problem. You do that because the first three solutions will always be anticipated [by the enemy] but not those ones when you've been thinking hard."

Describing Bagnold as "a mystic," Carr also remembers that his ascetic commander taught him that washing with sand in the desert was more effective than water because the former takes the grease off the skin better.

EQUIPMENT OF THE LRDG

GIVEN JUST SIX WEEKS TO RAISE HIS UNIT, BAGNOLD ASSEMBLED A FLEET OF VEHICLES AS WELL AS MAPS, RATIONS, COMPASSES, WEAPONS AND WIRELESSES

An LRDG member tracks his position

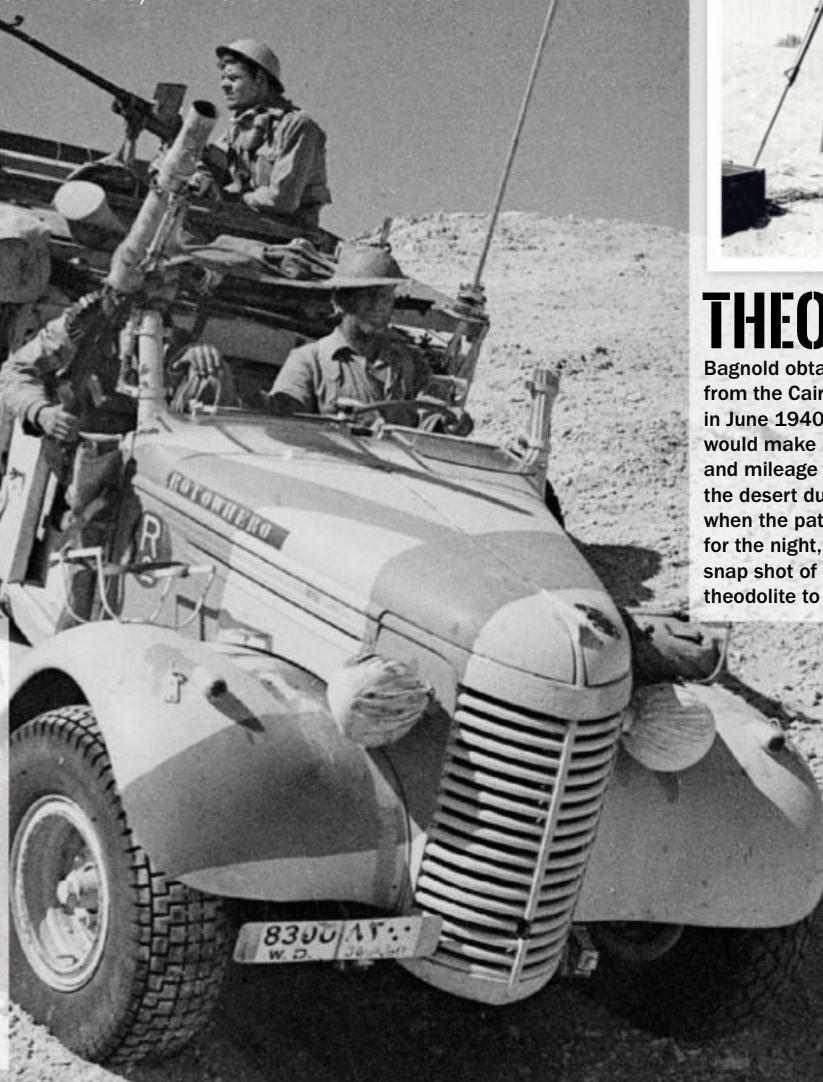


THEODOLITE

Bagnold obtained his theodolites from the Cairo Survey Department in June 1940. LRDG navigators would make a note of bearings and mileage as they drove across the desert during the day, and when the patrol stopped at dusk for the night, they would take a snap shot of the stars with the theodolite to confirm the position.

CHEVROLET

Bagnold chose the 30-cwt Chevrolet as the LRDG's vehicle because, in his words, it was "fast, simple and easy to handle." In July 1940 he was loaned 19 by the Egyptian government while General Motors in Alexandria supplied a further 14. The Chevrolet in this photo is a radio truck (the rod antenna is on the right), while the rear gunner is behind a Boys anti-tank rifle and the front gunner has his Lewis gun raised. Lofty Carr recalled that "the Chev was a wonderful vehicle, very tough, with the chassis specially shortened for us so we could get over obstacles such as rocks."



The low-friction locking design on the Vickers K proved resistant to jams from sand



VICKERS K

The gas-operated Vickers K machine gun could fire up to 1,200 .303 rounds a minute and had been designed originally for the RAF. When it began to be phased out and replaced by the Browning, the Vickers guns were distributed to the British army and became a favourite with the LRDG and later the SAS, who used them in both single and twin mounts.

WATER CONDENSER

Bagnold had discovered in the 1920s that water was lost when radiators boiled over and blew water off through the overflow. His solution was to replace the free overflow pipe by leading the water into a can half full of water on the side of the vehicle where it would condense. When the water began to boil and spurt, the driver would wait a minute or two for it to be sucked back into the radiator.



THE BIRTH OF THE SAS

sandstone in the north, the desert extended as far as the Tibesti Mountains, while the political frontier with Tunisia and Algeria marked its western limits.

The unit proves its worth

By the first week of August 1940, the unit was ready for its first patrol and the honour fell to 44-year-old Captain Pat Clayton. He and his small hand-picked party of seven left Cairo in two Chevrolet trucks. Crossing the border into Libya, they continued on to Siwa Oasis, where Alexander the Great had led his army in 332 BCE. "The little patrol of two cars then struck due west, exploring, and made the unwelcome discovery of a large strip of sand sea between the frontier and the Jalo-Kufra road," wrote Clayton in his subsequent report. "The Chevrolet clutches began to smell a bit by the time we got across, but the evening saw us near the Kufra track."

They laid up here for three days, taking great care to conceal their presence from the Italians, as they observed the track for signs of activity. They returned to Cairo on 19 August, having covered 1,600 miles of the barren desert in 13 days.

Clayton and Bagnold reported their findings to General Wavell, who, having heard an account of the unit's first patrol, "made up his mind then and there to give us his strongest backing." A week later, Wavell inspected the LRP and told them he had informed the War Office they "were ready to take the field."

Bagnold split the LRP into three patrols, assigning to each a letter of no particular significance. Captain Teddy Mitford commanded W Patrol, Captains Pat Clayton and Bruce Ballantyne (a New Zealander) were the officers in charge of T Patrol and Captain Don Steele, a New Zealand farmer from Takapu, led R Patrol. Each patrol consisted of 25 other ranks, transported in ten 30-cwt Chevrolet trucks and a light 15-cwt pilot car. They carried rations and equipment to sustain them over 1,500 miles and for armament each patrol possessed a 3.7mm Bofors gun, four Boys AT (anti-tank) rifles and 15 Lewis guns.

For the next two months the LRP reconnoitred large swathes of central Libya, often enduring daytime temperatures in excess

LRDG trucks were stripped of all non-essentials, including windscreens, doors and roofs



Right: LRDG medic Doc Lawson cools off



of 49 degrees Celsius as they probed for signs of Italian troop movements.

On 19 September, Mitford's patrol encountered two Italian six-ton lorries and opened fire, giving the aristocratic Englishman the honour of blooding the LRP in battle. In truth, it wasn't much of a battle; the Italians, stunned to meet the enemy so far west, quickly waved a white flag. The prisoners were brought back to Cairo, along with 2,500 gallons of petrol and a bag of official mail.

General Wavell was delighted, not just with the official mail that contained much important intelligence but with the LRP's work throughout the autumn of 1940. Bagnold capitalised on the praise with a request to expand the unit, suggesting to Wavell that with more men he could strike fear into the Italians by launching a series of hit-and-run attacks across a wide region of Libya. On 22 November, Bagnold was promoted to acting lieutenant-colonel and given permission to form two new patrols and reconstitute the Long Range Patrol as the Long Range Desert Group (LRDG).

For his new recruits, Bagnold turned to the British army and what he considered the cream: the Guards and the Yeomanry Divisions. By the end of December, he had formed G (Guards) Patrol, consisting of 36 soldiers from the 3rd Battalion The Coldstream Guards and the 2nd Battalion The Scots Guards, commanded by Captain Michael Crichton-Stuart. Y Patrol was raised a couple of months later, composed

of men from, among others, the Yorkshire Hussars, the North Somerset Yeomanry and the Staffordshire Yeomanry. For their inaugural operation, however, G Patrol was placed under the command of Pat Clayton, whose T Patrol would offer support.

A successful first mission

Their target was Murzuk, a well-defended Italian fort in south-western Libya, nestled among palm trees with an airfield close by. The fort was approximately 1,000 miles to the west of Cairo as the crow flies, and reaching it entailed a gruelling journey that lasted for a fortnight. There were 76 raiders in all, travelling in 23 vehicles, including nine members of the Free French who had been seconded to the operation in return for flying up additional supplies from their base in Chad.

The raiding party stopped for lunch on 11 January, just a few miles from Murzuk, and finalised their plan for the attack: Clayton's T Patrol would attack the airfield that lay in close proximity to the fort while G Patrol targeted the actual garrison. Crichton-Stuart recalled that as they neared the fort, they passed a lone cyclist: "This gentleman, who proved to be the postmaster, was added to the party with his bicycle. As the convoy approached the fort, above the main central tower of which the Italian flag flew proudly, the guard turned out. We were rather sorry for them, but they probably never knew what hit them."

Opening fire 150 yards from the fort's main gates, the LRDG force split, with the six trucks of Clayton's patrol heading towards the airstrip. The terrain was up and down, and the LRDG made use of its undulations to destroy a number of pillboxes scattered about, including an anti-aircraft pit.

Every patrol had a medic, navigator, radio operator and mechanic, who each rode in a truck equipped for their role

"IN TRUTH IT WASN'T MUCH OF A BATTLE; THE ITALIANS, STUNNED TO MEET THE ENEMY SO FAR WEST, QUICKLY WAVED A WHITE FLAG"



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Clayton, in the vanguard of the assault, circled a hangar and as he turned the corner, ran straight into a concealed machine gun nest. The Free French officer was shot dead but Clayton soon silenced the enemy position, and by the time his patrol withdrew, they had been responsible for the destruction of three light bombers, a sizeable fuel dump and killed or captured all of the 20 guards.

Meanwhile, G Patrol had subjected the fort to a withering mortar barrage, and after a brief fire fight, the garrison surrendered. Clayton selected two prisoners to bring back to Cairo for interrogation and the rest were left in the shattered remnants of the fort to await the arrival of reinforcements once it was realised the fort's communications were down.

The Nazis push back

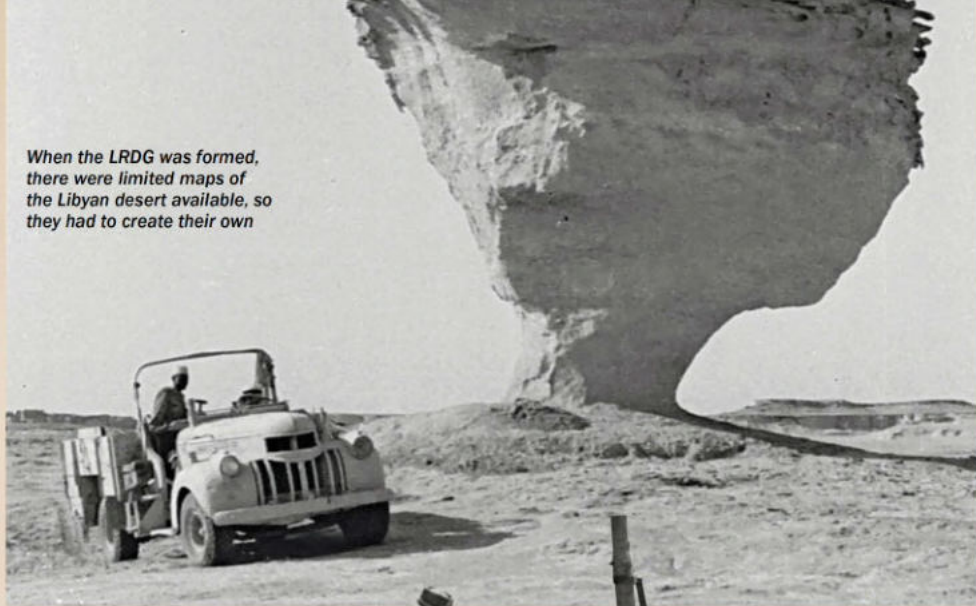
Following the Allied advance across Libya in the winter of 1940-41, Adolf Hitler had despatched General Erwin Rommel and the Deutsches Afrika Korps to reinforce their Italian allies. The Nazi leader had initially been reluctant to get involved in North Africa, but Admiral Erich Raeder, head of the German navy, warned that if the British maintained their iron grip on the Mediterranean, it would seriously jeopardise his plans for conquest in eastern Europe.

Rommel wasted little time in attacking the British, launching an offensive on 2 April that ultimately pushed his enemy out of Libya and back into Egypt, right where they had been in 1940. The British managed to hold on to only a couple of footholds in Libya, in the port of Tobruk and 500 miles south in the Oasis of Kufra. On 9 April, Bagnold and most of the LRDG were sent to garrison Kufra, to pass a summer of tedious inactivity that frayed Bagnold's usually equitable temper. He was also beginning to feel the strain of command, oppressed by the heat and the constant scuttling forth between Cairo and Kufra, and so on 1 August he handed over command of the LRDG to Lt-Colonel Guy Prendergast.

Prendergast had explored the Libyan Desert with Bagnold in the 1920s but had remained in the Royal Tank Regiment. Dour, laconic and precise, Prendergast kept his emotions hidden behind a cool exterior as he did his eyes behind a pair of circular sunglasses. Not to be underestimated, he was innovative, open-minded and a brilliant administrator.

His first challenge as the LRDG's new commander was to organise five reconnaissance patrols for a new large-scale Allied offensive (codenamed Operation Crusader) on 18 November. The aim of the offensive, planned by General Claude Auchinleck, the successor to the sacked General Wavell, was to retake eastern Libya and its airfields, thereby enabling the RAF to increase its supplies to Malta.

When the LRDG was formed, there were limited maps of the Libyan desert available, so they had to create their own



LRDG officers take a break from the Sun



"CLAYTON SOON SILENCED THE ENEMY POSITION, AND BY THE TIME HIS PATROL WITHDREW, THEY HAD BEEN RESPONSIBLE FOR THE DESTRUCTION OF THREE LIGHT BOMBERS, A SIZEABLE FUEL DUMP AND KILLED OR CAPTURED ALL OF THE 20 GUARDS"

The SAS arrive

The LRDG's role was the observation and reporting of enemy troop movements, alerting Auchinleck as to what Rommel might be planning in response to the offensive. But they had an additional responsibility: to collect 55 British paratroopers after they'd attacked enemy airfields at Gazala and Tmimi. This small unit had been raised four months earlier by a charismatic young officer called David Stirling and had been designated L Detachment Special Air Service (SAS) Brigade.

Stirling had convinced MEHQ that the enemy was vulnerable to attack along the line of its coastal communications and various aerodromes and supply dumps, by small units of airborne troops attacking not just one target but a series of objectives. Stirling and his men parachuted into Libya on the night of 17 November into what one war correspondent described as "the most spectacular thunderstorm within local memory." Many of

the SAS raiders were injured on landing; others were captured in the hours that followed. The 21 storm-ravaged survivors were eventually rescued by the LRDG and driven to safety, among them a bitterly disappointed Stirling.

It was Lt-Colonel Prendergast who resuscitated the SAS. Receiving an order in late November from MEHQ instructing the LRDG to launch a series of raids against Axis airfields to coincide with a secondary Eighth Army offensive, he signalled: "As LRDG not trained for demolitions, suggest pct [parachutists] used for blowing 'dromes'." Additionally, Prendergast suggested that it would be more practical for the LRDG to transport the SAS in their trucks.

On 8 December, an LRDG patrol of 19 Rhodesian soldiers and commanded by Captain Charles 'Gus' Holliman left Jalo Oasis to take two SAS raiding parties (one led by Stirling, the other by his second-in-command Blair 'Paddy' Mayne) to the airfields at Tamet and Sirte, 350 miles to the north west. Holliman's navigator

Two LRDG men on road watch



was an Englishman, Mike Sadler, who had emigrated to Rhodesia in 1937.

The raiding party made good progress in the first two days but then hit a wide expanse of rocky broken ground, covering just 20 miles in three painstaking hours on the morning of 11 December. Soon, however, the going underfoot became the least of their problems. "Suddenly we heard the drone of a Ghibli (the Caproni Ca.309, a reconnaissance aircraft)," recalled Cecil 'Jacko' Jackson, one of the Rhodesian LRDG soldiers. "Not having room to manoeuvre in the rough terrain, Holliman ordered us all to fire on his command. The plane was low, and when all five Lewis guns opened up, he veered off and his bombs missed."

The Ghibli broke off the fight but the British knew the pilot would have already been on the radio. It was only a matter of minutes before fighter aircraft appeared overhead. "We doubled back to a patch of scrub we had passed earlier," said Jackson, who, along with his comrades, made frantic efforts to camouflage their vehicles with netting. "We had just hidden ourselves when three aircraft came over us and strafed the scrub."

It was obvious to the Italians where the enemy were hiding, but they were firing blind all the same, tattooing the ground with machine gun fire without being able to see their targets. It was a terrifying experience for the LRDG and SAS men cowering among the patchy cover, feeling utterly helpless. All they could do was remain motionless, fighting the natural impulse to run from the fire. "I was lying face down near some scrub and heard and felt something thudding into the ground around me,"

remembered Jackson. He didn't flinch. Only when the drone of the aircraft grew so faint as to be barely audible did he and his comrades get to their feet. Jackson looked down, blanching at "bullet holes [that] had made a neat curve round the imprint of my head and shoulders in the sand."

Remarkably, the strafing caused no damage and the patrol moved off, reaching the outskirts of the targets without further incident. The plan was for Stirling and Sergeant Jimmy Brough to attack Sirte airfield while Paddy Mayne and the rest of the SAS hit Tamet. They left the following night, leaving the LRDG at the rendezvous in Wadi Tamet. At about 11.15pm, the silence was shattered by a thunderous roar three miles distant. "We saw the explosions and got quite excited, the adrenaline pumping through us," recalled Sadler. "The SAS were similarly excited when they arrived back at the RV. We buzzed them home and on the way they talked us through the raid, discussing what could be improved next time."

Though Stirling had drawn a blank at Sirte, Mayne had blown up 24 aircraft at Tamet. More successful co-operation between the LRDG and the SAS ensued with a five-man raiding party led by Lt Bill Fraser destroying 37 aircraft on Agedabia airfield. Mayne returned to Tamet at the end of December, laying waste to 27 planes that had recently arrived to replace the ones he'd accounted for a couple of weeks earlier.

Stirling and the SAS continued to rely on the LRDG as their 'Libyan Taxi Service' for the first six months of 1942, and he also looked to them for guidance in nurturing his embryonic SAS. "We passed on our

knowledge to the SAS and they were very grateful to receive it," recalled Jim Patch, who joined the LRDG in 1941. "David Stirling was a frequent visitor and he would chat and absorb things. He took advice, man to man, he didn't just stick with the officers, he went round to the men, too."

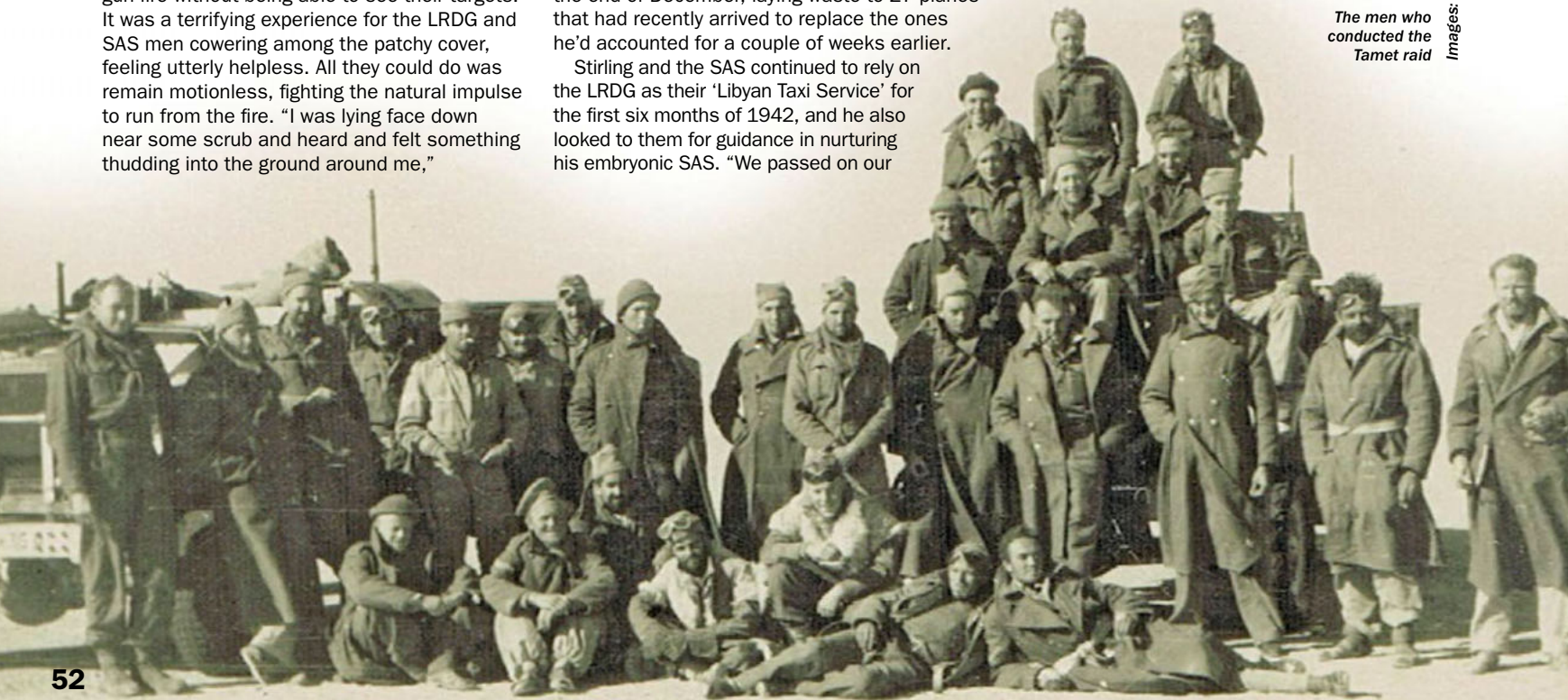
In the first six months of 1942, the SAS, thanks in no small measure to the LRDG, had destroyed 143 enemy aircraft. As Stirling noted: "By the end of June, L Detachment had raided all the more important German and Italian aerodromes within 300 miles of the forward area at least once or twice. Methods of defence were beginning to improve and although the advantage still lay with L Detachment, the time had come to alter our own methods."

For the rest of the war in North Africa, the SAS operated largely independently of the LRDG, using their own jeeps obtained in Cairo and their own navigators, now trained by the LRDG in the art of desert navigation. While the SAS conducted numerous hit-and-run raids against airfields and – following the El Alamein offensive – retreating Axis transport columns, the LRDG reverted to its original role of reconnaissance.

It was one that it accomplished with extraordinary diligence and endurance, often keeping enemy roads and positions under observation for days at a time, radioing back the vital intelligence to Cairo. With the desert war all but won, General Bernard Montgomery, commander of the Eighth Army, conveyed his thanks for the LRDG's magnificent work in a letter to Prendergast dated 2 April 1943, praising "the excellent work done by your patrols" in reconnoitring the country into which his soldiers had advanced.

In 1984, David Stirling expressed his thanks to the LRDG in an address to an audience gathered for the opening of the refurbished SAS base in Hereford, named Stirling Lines, in honour of the regiment's founder. "In those early days we came to owe the Long Range Desert Group a deep debt of gratitude," said Stirling. "The LRDG were the supreme professionals of the desert and they were unstinting in their help."

The men who conducted the Tamet raid



Images: Alamy, Getty

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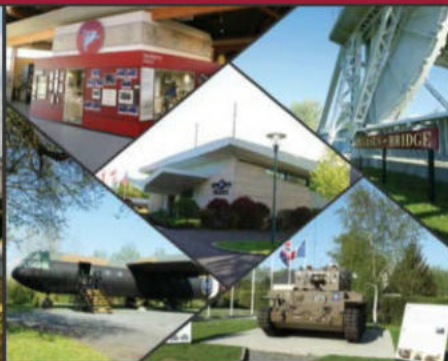


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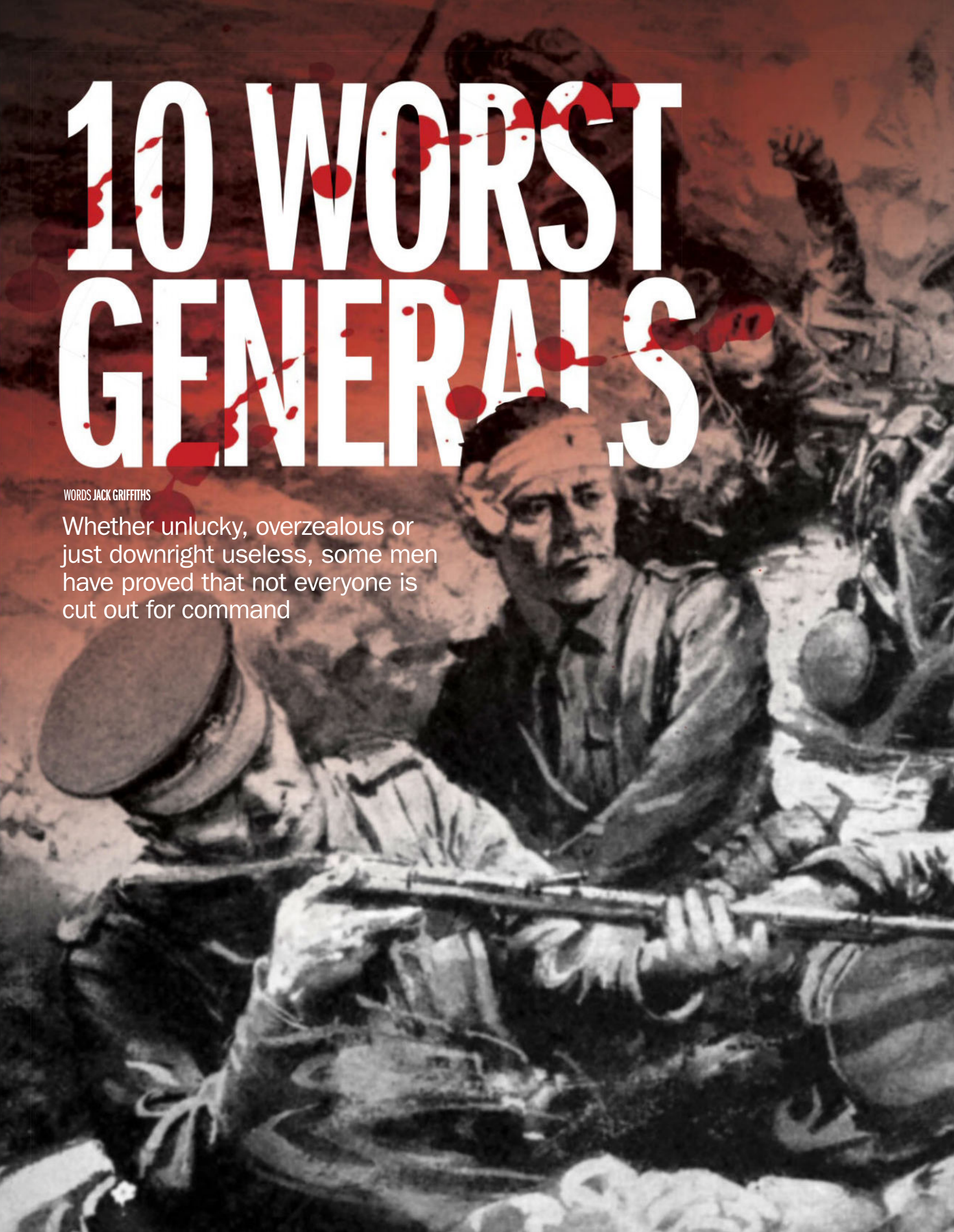
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10 WORST GENERALS

WORDS JACK GRIFFITHS

Whether unlucky, overzealous or just downright useless, some men have proved that not everyone is cut out for command



As trench warfare took hold in WWI, generals from across the Allied nations found themselves outdated

A general in any army is under a lot of pressure with the burden of organising, motivating and leading company upon company of men. However, many leaders across the years have been guilty of blunders that have cost them their honour, the lives of their men, and even worse.

Some simply didn't have luck on their side on the day, while others had their failure coming due to repeated mistakes or an awful approach to command.

Of course, the haplessness of generals isn't just a modern occurrence and the ancient world is littered with brutal, petulant and inept leaders.

However, in a wholly new type of global warfare, inept generals struggled en masse to adapt to the rigour of mechanised conflict. With increasingly devastating machines of war at their disposal, the mistakes made by each world war general had more disastrous consequences than ever before.

I ROBERT GEORGES NIVELLE

FRENCH THIRD REPUBLIC

SECOND BATTLE OF THE AISNE, 1917

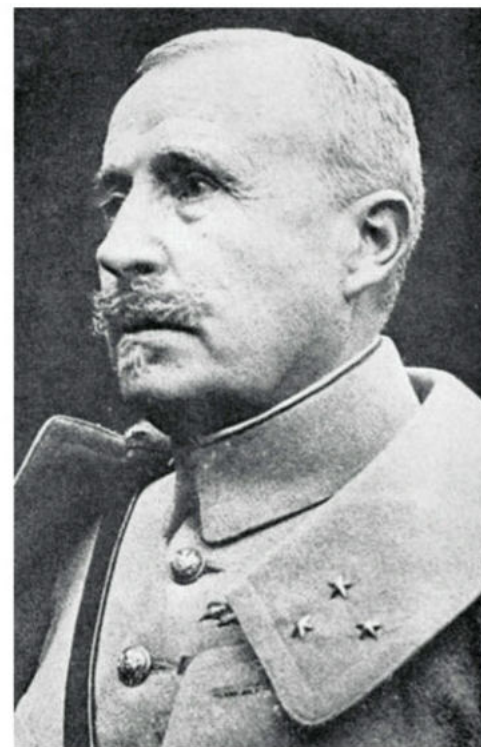
INITIALLY A VERY SUCCESSFUL GENERAL, NIVELLE'S WINNING STREAK CAME TO AN ABRUPT END AS HE BECAME OVER-CONFIDENT IN HIS ABILITIES

Before a series of blunders that cost many French and British lives, Nivelle's stock could have not been higher. The hero of Verdun, his command of the French Third Corps in 1915 allowed the Armée de Terre to launch counterattacks on German positions.

His success saw him promoted to succeed Joseph Joffre as the commander-in-chief, but this was as good as it got for Nivelle. With full British backing, his tactic of full-frontal assaults was used once again, but the Germans had got wise to this strategy and his troops suffered 120,000 casualties at the hands of the German MG 08 machine guns.

Nivelle was reckless and stubborn, convinced beyond measure that his tactic would work flawlessly once again. However, his victory was not forthcoming, as widespread mutinies followed further mass losses of life.

The Imperial German Army had seized on the French tactical plan and knew exactly what was coming for them. The whole catastrophe was enough for the army hierarchy, who soon found a replacement for Nivelle with Philippe Pétain on 15 May 1917. Fallen from grace, the general was later banished to North Africa, never to return to the Western Front again. He finally retired from military life in 1921.

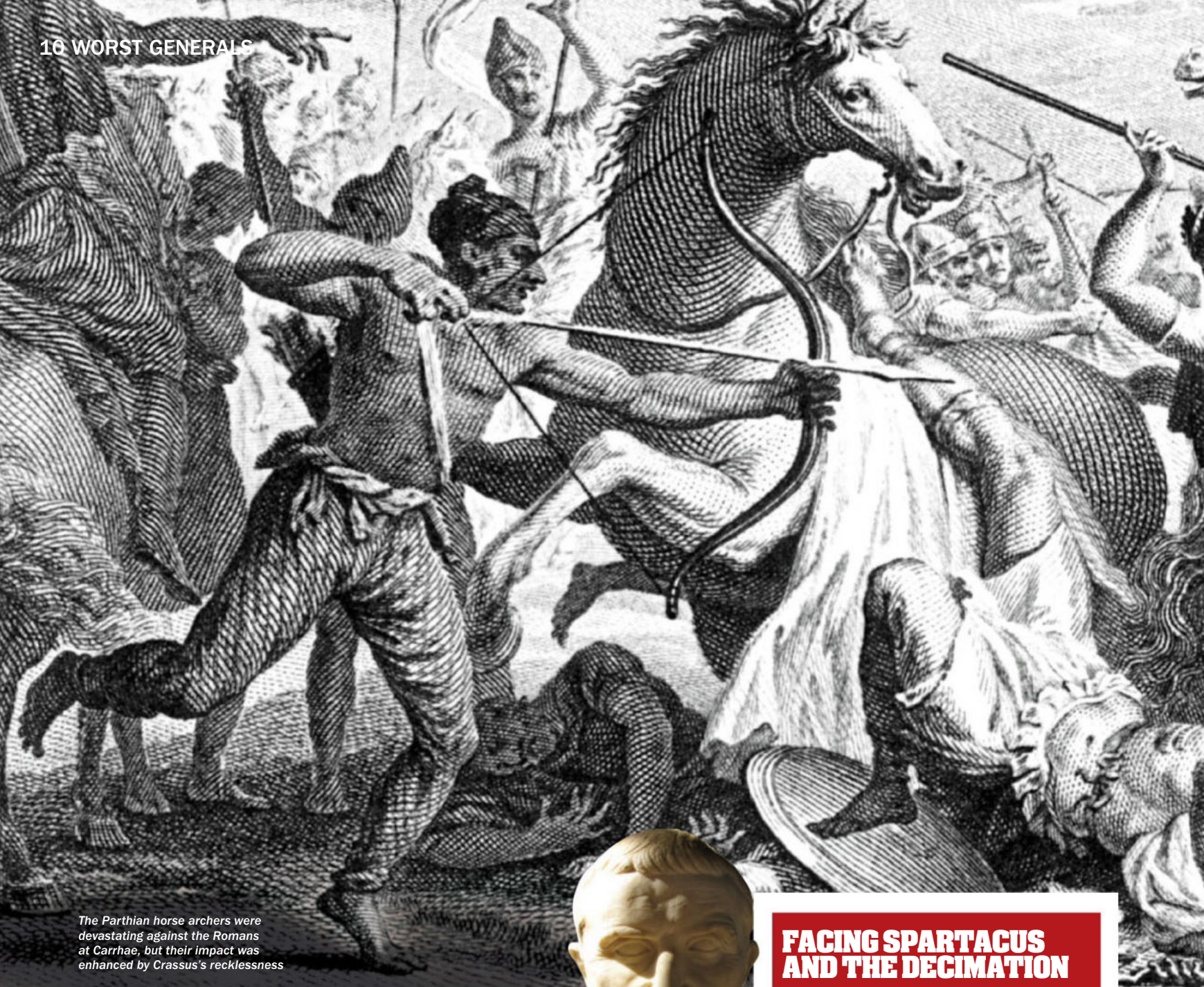


Since the war, Field Marshal Douglas Haig has been blamed for the poor leadership of the British soldiers on the Western Front



LAMBS TO THE SLAUGHTER WERE TROOPS REALLY LIONS LED BY DONKEYS?

One of the enduring points of discussion of the Great War was the treatment of the men at the front by the generals back home. The popular view of 'donkeys' was first put forward by historian Alan Clark and told of the uncaring commanders leading the infantry to mass graves on the Western Front, but how true is this? It is fact that an unprecedented amount of men died in the war (1.3 million French and 908,000 British were killed) but this was more down to the nature of the war rather than the attitude of the military leadership. The first war of its kind, the new tactics with machine guns and armoured divisions ushered out the use of infantry and cavalry charges, but this was learned the hard way. Mass conscription also meant that many poorly trained soldiers found their way to the frontline in a scale of warfare that had never been seen before. The notion of generals behind the lines far from the heat of battle is only partly true, as many died on the frontline with their men. Overall, military incompetence did play a part in the massacre on the Western Front, but revisionist history has proved that the learning curve of a new warfare was just as big a factor.



The Parthian horse archers were devastating against the Romans at Carrhae, but their impact was enhanced by Crassus's recklessness

2 MARCUS CRASSUS

ROMAN REPUBLIC

CARRHAE, 53 BCE
WITH UNBELIEVABLE WEALTH, AN
UNNERVING DESIRE FOR POWER AND
A BLOODTHIRSTY STREAK, THIS ROMAN
GENERAL WAS HIS OWN WORST ENEMY

Born into one of Rome's richest families, Marcus Crassus desired power as well as denarii. Using his vast wealth he built up his own force that defeated Spartacus and his slave army in 72 BCE in the Third Servile War. He then joined forces with both Caesar and Pompey, becoming the governor of Syria.

His recklessness and desire for war led him into an unsuccessful campaign that culminated

in the Battle of Carrhae. Drawn away from his coastal supply train and into the deserts of Mesopotamia, his army was away from its safe haven, but Crassus ignorantly pressed on nonetheless. Despite having superior numbers, his legions were both outthought and outfought by Parthian horse archers.

Having not studied Parthian tactics, the Roman cavalry was drawn out by the mounted archers, leaving their infantry exposed, and they were quickly encircled and massacred.

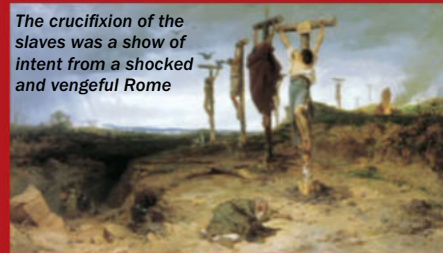
Even though they were in the standard Roman defensive square position, volley after volley of arrows pierced the Roman armor and 20,000 were killed in the catastrophic, ego-driven conflict. Crassus's death shortly after led to civil war in the Republic and rumors persist that when he was killed, molten gold was poured into his mouth as a final allusion to his greed.



FACING SPARTACUS AND THE DECIMATION

Spartacus and his army of slaves and gladiators had tormented the Roman Republic for well over a year, and his forces had swelled up to 30,000 men. Tasked with crushing the uprising, Crassus was determined for it to be him who stopped the mighty Spartacus. After his legate, Mummius, was defeated against the slaves in battle, Crassus disciplined his troops with the ancient punishment of decimation. This was the process of killing every tenth man in the army and more than 500 legionaries bore the brunt of this brutal action. The rebellion was defeated before it could make its way to Sicily and, as a punishment, 6,000 slaves were crucified along the Appian Road. Both of these instances prove that Crassus was as heartless as he was incompetent.

The crucifixion of the slaves was a show of intent from a shocked and vengeful Rome



4 ANTONIA LOPEZ DE SANTA ANNA

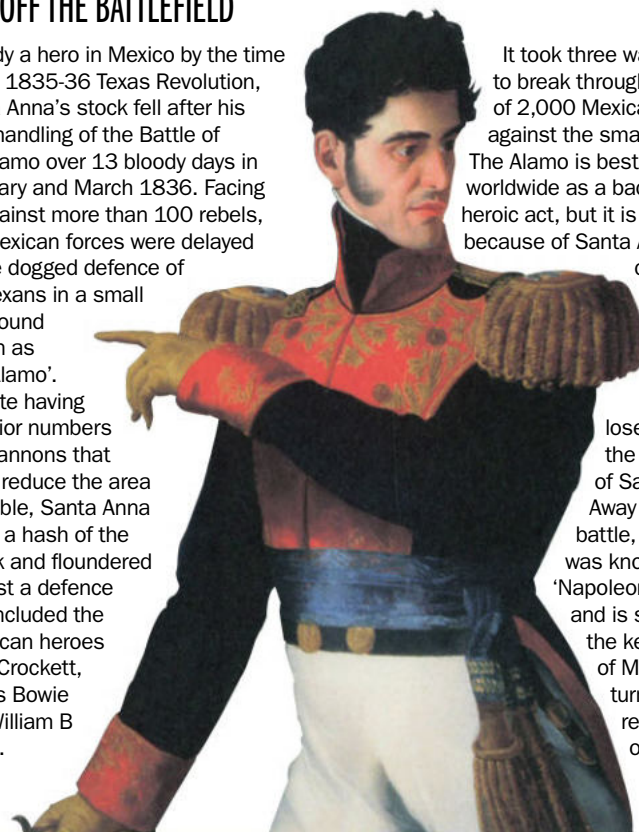
MEXICO

THE ALAMO, 1836

THE 'NAPOLEON OF THE WEST' WAS UNDOUBTEDLY A TALENTED GENERAL, BUT HIS DESIRE FOR PERSONAL GAIN OFTEN CLOUDED HIS JUDGEMENT ON AND OFF THE BATTLEFIELD

Already a hero in Mexico by the time of the 1835-36 Texas Revolution, Santa Anna's stock fell after his poor handling of the Battle of the Alamo over 13 bloody days in February and March 1836. Facing off against more than 100 rebels, the Mexican forces were delayed by the dogged defence of the Texans in a small compound known as 'the Alamo'. Despite having superior numbers and cannons that could reduce the area to rubble, Santa Anna made a hash of the attack and floundered against a defence that included the American heroes Davy Crockett, James Bowie and William B Travis.

It took three waves of attacks to break through and 600 out of 2,000 Mexicans perished against the small Texan force. The Alamo is best remembered worldwide as a backs-to-the-wall heroic act, but it is only this way because of Santa Anna's over-confidence in the 13-day siege. The Mexicans would embarrassingly lose the war at the decisive Battle of San Jacinto. Away from the battle, Santa Anna was known as the 'Napoleon of the West' and is seen as one of the key instigators of Mexico's era of turmoil. Historians remain divided over his legacy.



SANTA ANNA AND HIS MEXICAN HOMELAND

Antonio López de Santa Anna Pérez de Lebrón was selfish and greedy in his military career. The vast majority of his military operations were for personal gain and he changed alliances frequently for his own desires. For instance, in 1821 he supported the drive for Mexican independence but turned against its leader, Agustín de Iturbide, just a few years later. The same happened again to President Vicente Guerrero, who Santa Anna

helped rise to power but then also plotted his downfall. Perhaps the general's finest moment was when he fought against a resurgent Spain, who tried to retake Mexico in 1829. His efforts were rewarded with the country's presidency in 1833 and the nickname 'the Hero of Tampico'. His new centralised state then moved against the Texans in the north and the defeat set the wheels in motion for his downfall and the turmoil in a split Mexico.



The Battle of San Jacinto was the decisive conflict of the Texas Revolution and initiated a downward spiral for Santa Anna

3 PAVEL GRACHEV

SOVIET UNION



CHECHEN WAR, 1994

WITH A PROMISE TO STOP A REBELLION AT ANY COST, THIS GENERAL'S RAGE SAW THOUSANDS KILLED

Named a 'hero of the Soviet Union' in 1988 after his service in the Afghan War, Grachev had been the leader of the Russian Federation's airborne troops since 1990. After the outbreak of war in 1994, he was tasked with leading the initial advances into Chechnya. The future defence minister was adamant that the Chechen separatist forces must be crushed and he promised to use whatever force necessary in a 'bloodless blitzkrieg'. Confident his men would only need a couple of days to take the capital of the Chechen Republic, Grozny, his offensive faltered as his tanks were ambushed in the city's narrow streets. This enraged the Russian and his response was to carpet bomb the city, killing thousands in what was to be known as the 'Storm of Grozny'.

5 ALEXANDER SAMSONOV

RUSSIAN EMPIRE

TANNENBERG, 1914

PERSONAL RIVALRIES AND CONFLICTS WITH COLLEAGUES CLOUDED THIS GENERAL'S JUDGEMENT AND LED HIM AND HIS ARMY TO FAILURE



A veteran of the Russo-Turkish War and the Russo-Japanese War, Alexander Samsonov is best remembered for his leadership in World War I. Initially a cavalry officer, the Russian general found himself in

command of the Russian Second Army by 1914. Tasked with invading East Prussia, the Battle of Tannenberg would be Samsonov's first real test and also his defining moment as a military leader.

After falling out with the commander of the First Army, Paul von Rennenkampf, and continued poor communications with the headquarters of Stavka, the general found his forces surrounded by the German Eighth Army, led by Paul von Hindenburg and Erich Ludendorff. The two Russian officers had

already fallen out once before in the Battle of Mukden in 1905, so it was a poor decision by the hierarchy to pair the two once again.

Samsonov's catastrophic blunder came when his army took five days longer to mobilise than his ally, resulting in a gap forming between the two armies. Now playing catch up, Samsonov's forces were stretched, and he paid next to no attention to the protection of his army's rear. The communication breakdown, interception of messages by the Germans and a lack of supplies put the Second Army in disarray, resulting in a rarity in warfare – the near complete destruction of an army, totalling 150,000 deaths and prisoners.

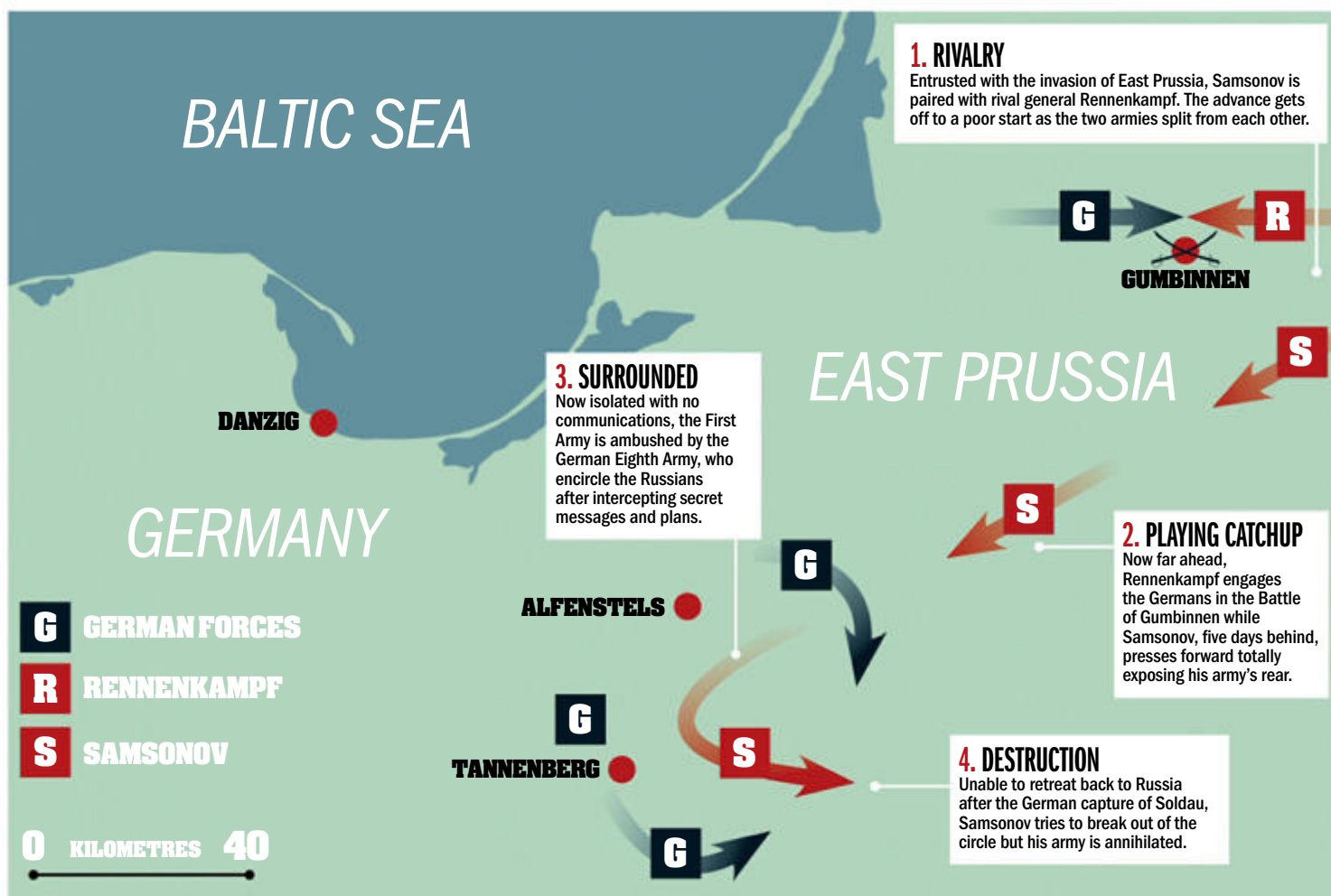
The debacle was so bad that the disgraced Samsonov committed suicide at the end of the battle rather than face the consequences of capture by the Germans or punishment back in Moscow. The Battle of Tannenberg was Russia's worst defeat in World War I and the news was initially kept from the British public – it was that bad.

THE EASTERN FRONT

A phrase usually associated with World War II, it was also an important tactical front during the Great War. Russia had an army of almost six million, the largest in the world at the time, and its full might was launched at the Germans in 1914. Even though they had by far and away the most manpower, poor leadership from the likes of Samsonov and an archaic communication system caused the Russian Imperial Army to stumble. Ignoring Austria-Hungary, the Russians headed straight for Germany but were let down by their poor strategy and almost three million men were killed or wounded after Tannenberg and Lodz. Unrest continued and with revolution on the horizon, all momentum was lost after the failed Kerenski Offensive a few months before October 1917.



In total, 15 million men served Russia in World War I with nearly two million killed, 2.8 million wounded and 2.4 million taken prisoner



6 MAURICE GAMELIN

FRENCH THIRD REPUBLIC

BATTLE OF FRANCE, 1940

DESPITE HIS EXPERIENCE IN THE GREAT WAR, THIS FRENCH GENERAL WAS ALL AT SEA ONCE THE GERMAN PANZERS ROLLED OVER THE FRENCH BORDER

A veteran of World War I, President of the Supreme War Council Maurice Gamelin had more experience than most when the threat of the Third Reich appeared on France's radar. Although a widely respected military mind, his mistakes cost his home country dearly.

A strong supporter of the flawed Maginot Line, he believed that France had the best army in the world and, like many in the French military, never considered the blitzkrieg that would roar through the Ardennes in 1940. With troops to the north and south, the advance scythed the British and French armies in two. Gamelin was still stuck in his World War I ways, seeing the tank as an accompaniment to the infantry and nothing else.

His flaws and failure to anticipate or even react to the Wehrmacht's moves have been

well documented by historians since 1940. He had poor leadership skills and often hesitated to act when big calls were required, only to then order a flurry of decisions that confused his officers. Many don't understand how he failed to see the danger after the invasion of Poland in the Phoney War. Gamelin had plenty of opportunities to launch pre-emptive attacks on the Germans but his ultra-defensive mantra went against the idea of strategic bombing or any sort of land offensive.

His obsolete ways are also believed to have led to the quote: "There is no such thing as the aerial battle," words he had to swallow when the Luftwaffe proved fundamental to the success of blitzkrieg. The hapless Gamelin was removed from his post on 18 May 1940, but the damage had already been done.

"HE HAD POOR LEADERSHIP SKILLS AND OFTEN HESITATED TO ACT WHEN BIG CALLS WERE REQUIRED, ONLY TO THEN ORDER A FLURRY OF DECISIONS THAT CONFUSED HIS OFFICERS"

WAS GAMELIN JUST MISUNDERSTOOD?

Prior to the calamity of World War II, Maurice Gamelin presses a good case for being quite an astute general and perhaps one of the best France ever had. Born in Paris in 1872, he began his career as an officer and assistant to General Joseph Joffre in North Africa. Gamelin rose through the ranks and was a lieutenant colonel by the outbreak of World War I. He would be instrumental in the victory at the First Battle of the Marne and led with distinction in Alsace and at the Somme. By the end of the war he had reached the rank of chief of staff of army reserve and his career went from strength to strength as he led French expeditions in Brazil and the Middle East. By the time of World War II, only Joffre had ever had more power in the French military.

A French infantry charge from the First Battle of the Marne, where Gamelin showcased his military intelligence



Soldiers stand at the Maginot Line, of which Gamelin was a strong supporter, to his detriment



7 LUIGI CADORNA

KINGDOM OF ITALY

CAPORETTO / 12TH BATTLE OF THE ISONZO, 1917

LUIGI CADORNA FACED A CHALLENGE DEFENDING THE ALPS FROM THE CENTRAL POWERS, BUT IT WAS MADE EVEN HARDER BY HIS POOR DECISION MAKING

Luigi Cadorna had risen through the ranks to become Italy's chief of staff at the outbreak of World War I. Commanding the Italian border with Austria-Hungary to the north, he massed his army in the region of Trentino to form a defensive wall against the threat from the Alps. Initially, Cardona had some successes, but whenever the battle was going against him, he dealt with his men in the most ruthless fashion. He ordered the execution of more than 750 men and purged his fellow commanders, dismissing some 217 officers. The defeat at Caporetto was Cadorna's worst moment as

the Austrians, assisted by their German allies, broke through the Italian ranks. Going against the other commanders, Cadorna employed an attacking stance rather than a defensive line and was taken by surprise when the Central Powers stormed through.

With his armies completely scythed through, Cadorna made another mistake when instead of withdrawing, he stood his ground, resulting in devastating losses of 300,000 Italian casualties. For his poor performance through misjudgment and hesitation, the Italian general was dismissed.

“HE ORDERED THE EXECUTION OF MORE THAN 750 MEN AND PURGED HIS FELLOW COMMANDERS, DISMISSING SOME 217 OFFICERS”



Italian prisoners of war marching behind Austro-Hungarian lines after Caporetto



8 GEORGE BRINTON McCLELLAN

UNITED STATES OF AMERICA / UNION

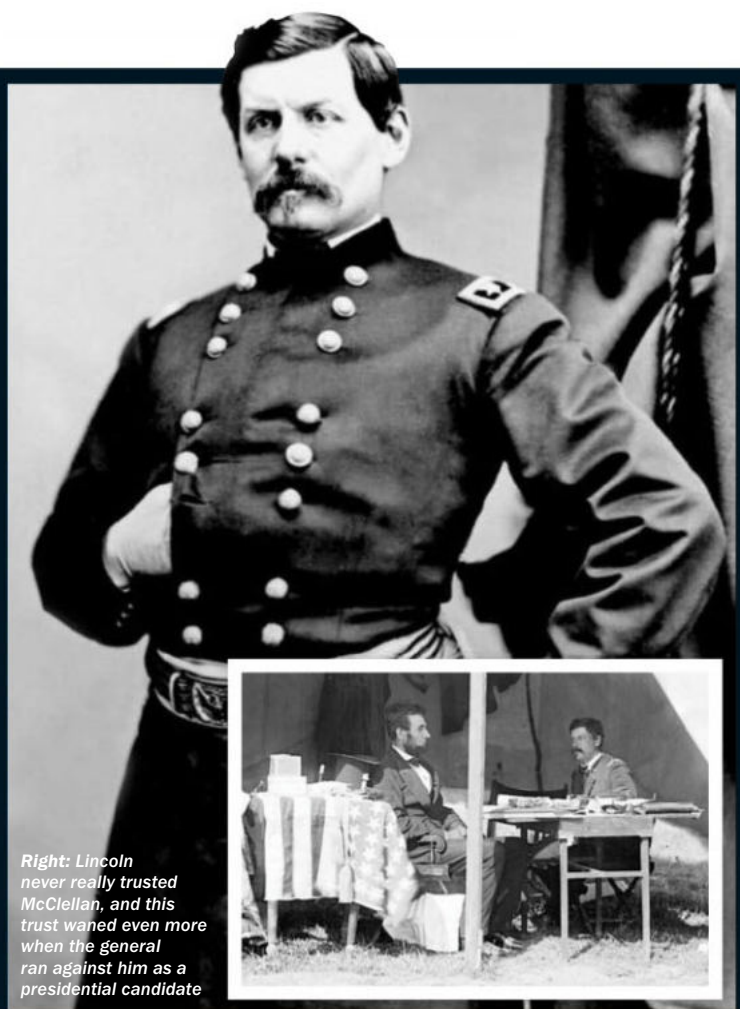
ANTIETAM, 1862

DISTRUSTED BY ABRAHAM LINCOLN AND OTHER UNION LEADERS FOR HIS FAILURE TO PRESS ADVANTAGES, McCLELLAN WAS A HESITANT UNDERACHIEVER

Rather than being particularly pompous or incompetent, McClellan had a trademark caution that prevented him from achieving many decisive victories. His inability to conclusively crush the Confederate forces in battle led to frequent visits from President Lincoln, who was ever frustrated at the slow movement of McClellan's men. The best example of this restrained style was at Antietam, the bloodiest day of the American Civil War.

The fragmented Union attacks failed to dislodge Robert E Lee's forces despite the north outnumbering the southerners, who were trapped with their backs to the Potomac River. A concentrated attack would almost have definitely knocked out Lee's forces with minimal losses to the Union. It eventually got too much for the president in November 1862, as the cautious McClellan was relieved of his duty.

"McCLELLAN HAD A TRADEMARK CAUTION THAT PREVENTED HIM FROM ACHIEVING MANY DECISIVE VICTORIES"



Right: Lincoln never really trusted McClellan, and this trust waned even more when the general ran against him as a presidential candidate

9 WILLIAM WINDER

UNITED STATES OF AMERICA

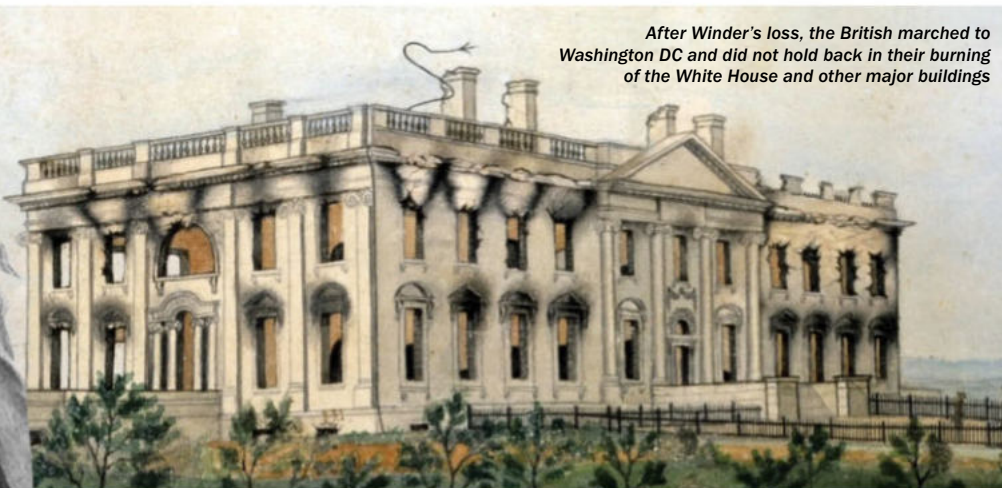
BATTLE OF BLADENSBURG, 1814

THE GENERAL WHOSE POOR DECISIONS ALLOWED THE US CAPITAL CITY TO BE RANSACKED BY THE VENGEFUL BRITISH

Unlucky and unskilled as a leader, William Winder is considered one of the worst American generals of all time. After several mistakes at the Battle of Frenchman's Creek, the Brigadier General faced off against the British at Bladensburg. With 5,000 men he outnumbered his opponents, but, due to a lack of coordination in the ranks, the British routed the Americans. It was later discovered that

Winder had ordered his best-trained troops to guard supply depots rather than fight.

Angered by this decision, the soldiers marched to the battlefield anyway, only to find that Winder had already ordered a hasty and confused retreat, leaving Washington wide open to attack. This would be forever known as the 'Bladensburg Races' and the general would go through court martial proceedings as a result.



After Winder's loss, the British marched to Washington DC and did not hold back in their burning of the White House and other major buildings

10 JAMES ABERCROMBIE

BRITISH EMPIRE

CARILLON, 1758

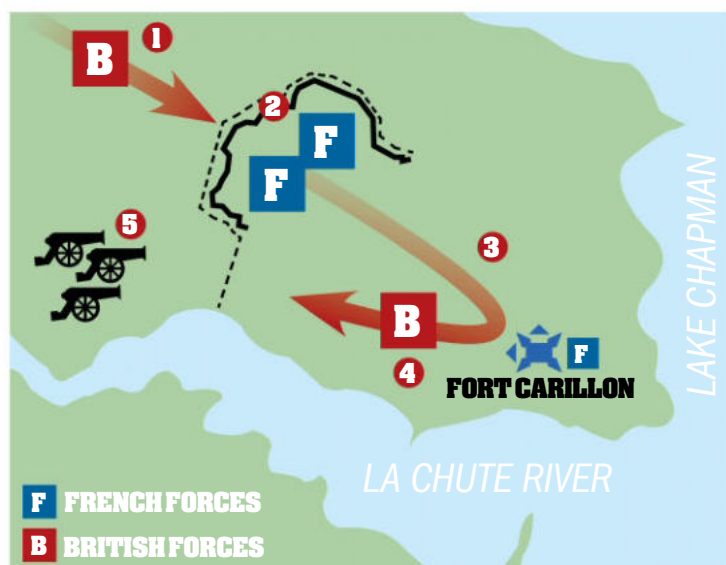
PUTTING HIS FAITH IN INFANTRY, THIS BRITISH GENERAL FOOLISHLY ATTACKED A FORTIFIED POSITION WITHOUT THE HELP OF ARTILLERY

Born in an era of peace in the empire, Abercrombie was first interested in politics but moved towards military matters after a period as lieutenant governor of Stirling Castle. The moment that he is remembered for came in the Seven Years' War, serving as commander-in-chief of the British Army and leading the Third Corps into Canada to engage the French.

Instantly unhappy with what he saw as ill-disciplined provincial troops and insufficient artillery, many of his early advances were orchestrated by his enthusiastic second-in-command Lord Howe. Five kilometres (three miles) south of Fort Carillon, the advance ground to a halt in a dense forest. Howe was then killed in a skirmish attack giving Abercrombie full control. Entrenched a short distance from the fort, the politician-made-general sat down

with his engineers and planned their next move.

Taking the advice of his men, Abercrombie ordered an immediate head-on assault on the stronghold – a disastrous move. The siege was ineffectual and got nowhere near breaching Carillon. Strangely, only infantry made the attack on the fort with the British not using their artillery, which would have surely given them a fighting chance. After four hours of bloodshed, a retreat was called with 1,944 British dead or missing. Falling back southwest to Lake George, the disheartened and low-in-confidence Abercrombie refused to make another decision before hearing from his superior, General Amherst. His incompetence didn't go unnoticed and he was recalled in September of that year. He never saw active service again and lived out his last years haunted by his failure.



1. OVERNIGHT CAMP

With a force of about 15,000 men, General Abercrombie and his men camp on the banks of Lake George ready to attack the French Carillon Fort and its garrison of 3,500 men.

2. DEATH OF HOWE

Attacking the French trenches surrounding the fort, Howe is killed, but the British emerge victorious and ready to siege the main

stronghold, which, according to engineers, can be taken without artillery support.

3. ATTACKING THE FORT

The infantry advance on Carillon but instantly come under heavy fire from the French ramparts. For hours, wave after wave of British soldiers attack, but to no avail.

4. FAILED ASSAULT

Under heavy fire and struggling in the abatis

defences, a British withdrawal is inevitable and retreat is eventually called at 5pm. The soldiers manage to reach the base of the fort but get no further before falling back.

5. FAILURE

The British Army awake the next day, their infantry strength shattered but their artillery unused. Abercrombie's reputation is destroyed and his recall from service about to be signed.



Despite the overwhelmingly superior numbers of British, Abercrombie's forces failed to breach the fort

Images: Alamy, Corbis, Getty

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Heroes of the Victoria Cross

JAMES POWER CARNE

The inspiring colonel who rallied his troops for one of the most impressive last stands in British military history

WORDS FRANCES WHITE

If there were ever a man who perfectly encapsulated the British stiff upper lip fighting spirit, it was James 'Fred' Power Carne. Described by one of his officers as "one of the most silent individuals I have ever met," Colonel Carne was a quiet, determined man with a will of steel. Born in Falmouth, Cornwall, on 11 April 1906 to George Newby Carne, a brewer and wine merchant, James was educated at the Royal Military College, Sandhurst, and commissioned into the Gloucestershire regiment in 1925. He served as part of the King's African rifles during World War II and also spent time in Burma. However, it was his actions during the Korean War that would serve as his enduring legacy.

Lieutenant Colonel Carne was relaxing at a cricket match on a lazy Wednesday afternoon in July 1950 when he received the news that would transform his life. The message said that the 29th brigade was to mobilise for action in Korea; Carne read it slowly and without emotion. The British government had not yet announced that it would be going to war with North Korea, but it came as no surprise to Carne – American troops had already begun to pour into the country and he knew Britain would not be far behind.

Carne may have been prepared for war, but his battalion certainly was not. Despite the conscription, reservists and national servicemen had to be called up to fill the ranks. As lieutenant colonel of the 1st Battalion, the Gloucestershire Regiment, Carne was determined to ensure all his men were fighting fit. But this was tricky – the common belief was that the war was nearly won. As the ship carrying the soldiers pulled away from Southampton, the men onboard were jubilant – they expected to be doing



FOR VALOUR

The Victoria Cross (VC) is the highest military honour awarded to service men and women in the Commonwealth. It is awarded for valour in the face of the enemy and can be given to anyone under military command.

WHY DID HE WIN IT?

When his battalion was cut off and surrounded, Carne's calm and confident leadership encouraged the men of the Gloucestershire Regiment to hold their own against a relentless assault comprising 11,000 attackers.

WHEN WAS HE AWARDED THE CROSS? 27 October 1953

WHERE WAS THE BATTLE? Imjin River, Korea

WHEN DID IT TAKE PLACE? 22-25 April 1951

a little cleaning up before returning home to victory parades. In the face of his men's relaxed attitudes, Carne trained and pushed them as if they were going into the heart of the Somme. Despite his 'old-school' attitude and strict tendencies, the men immediately warmed to Carne. Aged 45, constantly smoking his trademark pipe and with a firm but fair approach, he became very popular among the Glosters.

Little did the Glosters know, their trust in their colonel would soon mean the difference between life and death. Rumours of Chinese troops crossing the Manchurian border began to surface and it was quickly confirmed that

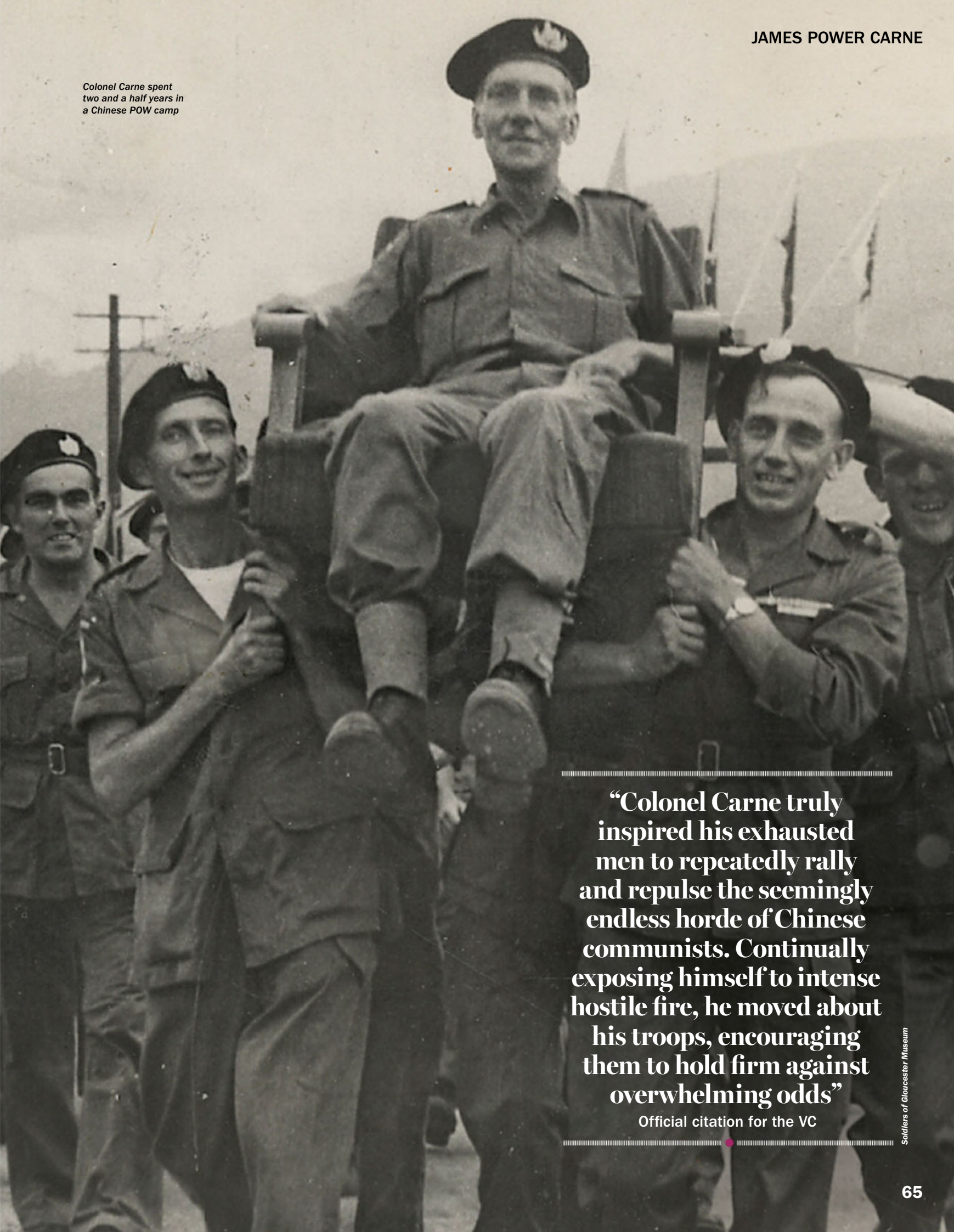
China had entered the war. The Glosters' involvement in the conflict had only just begun and the victory parades they dreamed of would have to wait. The Chinese made rapid advances through the country and Carne realised his men had a gruelling fight against a formidable foe on their hands.

The capital of Seoul had changed hands four times in a bitter year of fighting and as 1951 arrived, China prepared to take it back in its spring offensive. The UN aimed to create a buffer in front of the city and the 29th Brigade held a vital section of the line. Colonel Carne and his men were placed on the left flank guarding a ford over the Imjin river, while the Belgian Battalion was north of the river. Because of the lack of men, the four battalions of the 29th Brigade were scattered, with huge gaps in their deployment. Coupled together with a lack of heavy artillery, the British position was a very vulnerable one, and an attack was on its way.

When night fell on 22 April, the advancing Chinese managed to move around the Belgians and began to make their way across the Imjin river. Determined to stop the advance, Carne encouraged his Glosters to unleash heavy fire upon the Chinese troops; they fired so furiously that their guns grew scorching hot and began to seize up. As the night went on and stream after stream of Chinese pushed on across the river, it became clear that they had broken through the fractured UN and ROK lines.

By the next morning, Carne and the Glosters, despite fighting furiously, were steadily pushed back by the relentless numbers of Chinese. As the hours ticked past, wave after wave of Chinese troops attacked with rifles, grenades and machine guns. Carne

Colonel Carne spent
two and a half years in
a Chinese POW camp



**“Colonel Carne truly
inspired his exhausted
men to repeatedly rally
and repulse the seemingly
endless horde of Chinese
communists. Continually
exposing himself to intense
hostile fire, he moved about
his troops, encouraging
them to hold firm against
overwhelming odds”**

Official citation for the VC

“Lieutenant-Colonel Carne showed powers of leadership that can seldom have been surpassed in the history of our Army. He inspired his officers and men to fight beyond the normal limits of human endurance”

Official citation for the VC

had no option but to withdraw the Glosters from their position and re-form on a nearby hill, which would later become known as Gloster Hill. As the night drew in, constant enemy reinforcements streamed across the Imjin with one aim – to eliminate the now exposed and surrounded Glosters.

Not only did the Glosters lack any heavy artillery, but half of the men were already dead or wounded, and the remainder were exhausted. Supplies were low, with one company resorting to launching empty beer bottles at the advancing enemy, and attempts to reinforce the troop were abandoned due to the thick and impassable terrain. The Glosters, and Colonel Carne especially, were on their own.

If Carne was under pressure, he didn't show it. He had been calmly smoking his slow-burning pipe through the constant panicked messages of “they're coming again,” reassuring his men that all was under control. Although he appeared a vision of composure, he had personally fought back groups of advancing Chinese on two separate occasions, armed with bayonets and grenades. As he returned over the ridge after driving another group back, a captain queried what had happened, and he casually replied: “Oh, just shooting away some Chinese.”

Carne faced an impossible situation; his battalion was just 300 men strong, including cooks and drivers, facing countless thousands of Chinese with just enough ammunition to last 12 hours. But, with just a meagre supply of food and water, he and his men were to hold out as their position was pummelled by mortars, machine gun rounds and constant assaults from their enemy.

Carne and his men, encircled on the hill, had no option but to watch the other battalions retreat, and as Carne radioed headquarters, he received the lone instruction: “Hold where you are.” The situation was utterly dire and on paper seemed hopeless, but Carne refused to let this show. If the retreating battalions were going to stand any chance of survival, he and the Glosters would have to keep the Chinese occupied with what little resources and energy remained. Carne knew that what was being asked of him was close to a suicide mission, but if the Glosters' sacrifice could buy valuable time, then so be it.

Carne pushed back all the fear and doubt and appeared to his men the picture of confidence. As the Brigade Commander

radioed through and asked how his battalion were coping, he responded that all was well, they could hold on and everyone was in good heart. The colonel moved between the positions of all his men under heavy machine gun fire, smoking his pipe with a cool, calm demeanour and encouraged them nonstop through the day and night.

The Chinese were constantly launching assault after assault, but the Glosters drove them back, claiming thousands of lives as they defended their precarious position. As the battle raged on relentlessly through the night, the Glosters steadily lost almost everything – their ammunition, support, and the majority of their very lives, but thanks to Carne their morale never wavered. Finally, after one of the longest nights in military history, morning dawned on the 25th with the Glosters fighting strong and still defending their position – upon discovering this, the brigadier commented: “Only the Glosters could have done it.”

The Chinese losses were huge. The Glosters had inflicted a brutal blow to their enemies, who suffered some 10,000 casualties. The Chinese 23rd army was pulled out of the front line and the armed forces in general would never again attempt a similar frontal assault. However, despite their valiant stand, there was more bad news for the Glosters. The infantry column sent to relieve them to allow their escape was not coming – they would have to fight their way out alone. Carne organised his men, now numbering just 169, into separate companies to break out independently in the hope that at least some would make it to the safety of the UN line.

Carne was able to avoid capture for a day but, eventually, he and the majority of the Glosters were marched to a prisoner of war camp. While his men were subjected to ‘re-education’, Carne was singled out for great lengths of time in mind-breaking solitary confinement. The colonel kept himself sane in the appalling and torturous conditions by carving stone crosses, which his battalion used for prayer. He was finally released in September 1953, and on 27 October was awarded the Victoria Cross. Three days later the Gloucestershire Regiment was given permission to wear the Distinguished Service Cross for their valiant and heroic last stand against overwhelming forces. Carne, forever unruffled, offered a single comment on his captivity: “I have gained an added pride in being British and have lost a little weight.”

01 The Chinese advance On the north bank of the river, a Chinese patrol advances east towards the bridges across the Imjin. The 29th brigade is unable to secure the bridges and faces an all-out attack from the numerically superior foe. Several companies are separated and forced to retreat.

02 The left flank On the left, the Gloucestershire regiment is heavily engaged, and Carne encourages his men to unleash hell upon the Chinese advance. The enemy takes advantage of the fractured battalions and Carne has no option but to move the Glosters back onto Hill 235.

04 Defiant stand

Despite the huge and increasing numbers of Chinese, the Glosters manage to cling on thanks to the support of Colonel Carne. He moves through the ranks under heavy fire, encouraging his exhausted men through the night. The Glosters, 300 strong, claim thousands of Chinese lives and continuously drive the enemy back, defending their position.

05 Last men standing

Carne manages to lead his men through the night, and upon learning that they will receive no support in their retreat, encourages his men to make for the British lines in the hope that some will make it. Carne escapes capture for one day, but is eventually taken to a prisoner of war camp.

03 The Glosters alone

Now alone and surrounded, attempts are made to reinforce the Glosters with a Filipino battalion and tanks, but this is impossible due to the terrain. The battalion is pummelled by mortar fire and constant assaults but Carne remains calm, collected and level-headed.

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HARRIER

GR9

The final Harrier used by the RAF is a hi-tech aviation powerhouse and an upgrade to one of the finest aircraft designs of all time



One of Britain's most celebrated engineering innovations of the last century, the Harrier's unique design has made it a deadly war machine and a global icon. First appearing in 1957, and followed by many updated versions, by 1980 the line was in need of a shakeup, so the USA and UK agreed on a £184 million (\$280 million) project – the result was the Harrier II. Before its later purchase by the US AV-8B fleet, it served in Kosovo, Iraq and Afghanistan on the Invincible class of aircraft carrier.

An ideal machine for both attack and reconnaissance missions, the Harrier II was deployed frequently by NATO to deter violence

after the collapse of Yugoslavia. Later in its life span, the aircraft was joined by Sea Harriers in a new line-up known as Joint Force Harrier.

During the Invasion of Iraq, the British action worked under Operation Telic and at the Battle of Basra. Here, Harriers destroyed many Scud missile launchers and fuel depots using the effective AG-65 air-to-ground Maverick missile. The last aircraft of this type to see service in the Royal Navy was the GR9, which is still in service in the United States Marine Corps.

First coming into service in October 2006, it is an update of the GR7 and boasts advanced precision weaponry, new communications and airframe upgrades. The model at Fleet

Air Arm Museum is the ZD433, which was delivered on 20 December 2011. Today it is affectionately known as 'Dirty Harry' and has been maintained in the same condition as when it served.

BRITISH AEROSPACE HARRIER II GR9

FIRST MANUFACTURED 2006

ORIGIN UK

LENGTH 14.36m (47ft)

ENGINE RR Pegasus 105 turbofan

MAXIMUM SPEED 574 knots (660mph)

THRUST 21,750lbs

MAX ALTITUDE 13,106m (43,000ft)

CREW 1

ARMAMENT AIM-9L Sidewinder, Maverick, Paveway II, Paveway III, Enhanced Paveway, General Purpose Bombs, CRV-7 rocket pod



The inside of a Harrier II cockpit as it's about to take off from HMS Ark Royal in 2010

"THE HARRIER'S UNIQUE DESIGN HAS MADE IT A DEADLY WAR MACHINE AND A GLOBAL ICON"

**"AN ULTRA-EFFECTIVE AIR-TO-AIR MISSILE,
THE SIDEWINDER IS RIGHT AT HOME WITH THE
HARRIER'S ADVANCED TECHNOLOGY, UTILISING THE
ONBOARD ACTIVE INFRARED GUIDANCE SYSTEM"**



A Harrier GR9 in flight with a full payload of missiles

ARMAMENT

In 2004, BAE Systems was awarded a £100 million (\$151 million) contract to develop the weapons on the GR9 to help it perform its attack duties. Taking inspiration from the Sea Harriers that served the British so admirably in the Falklands, the preferred weapon of the Harrier II is the supersonic heat-seeking AIM-9 Sidewinder. An ultra-effective air-to-air missile, the Sidewinder is right at home with the Harrier's advanced technology, utilising the onboard active infrared guidance system. Targets on the ground are also at risk from the GR9, as it comes equipped with Paveway or Maverick bombs that can destroy a large surface area or important objectives with blast, penetration and fragmentation. Unlike many attack aircraft, the GR9 is not armed with a machine gun but does incorporate a Brimstone anti-armour system and a pod of CR7 rockets.



The aircraft's pod rockets next to the auxiliary fuel tank



The unguided pod rockets are a mainstay of the Harrier II's armoury and are frequently used when missiles aren't available



As the control system is so advanced, the GR9 is easier to fly than its predecessors

DESIGN

The wings on a Harrier II span 9.25 metres (30.33 feet), a 14 per cent increase in area on earlier models. The thicker wings and their leading edge root extensions also allow a much higher payload than before – 3,035 kilograms (6,700 pounds) more can be carried as long as the Harrier is allowed a 300-metre (1,000-foot) takeoff. The extra weight is made up of an added missile pylon plus a strengthening of the leading edges of the wings to combat bird strikes, which have caused more issues in the past than you would probably think.

“THE AIRCRAFT ALSO HAS A TARGETING POD THAT USES THERMAL IMAGING AND A LASER DESIGNATOR TO IDENTIFY HOSTILES ON THE GROUND”



The bubble canopy gives the pilot excellent 360-degree views so they can easily see if an enemy is on their six

COCKPIT

The GR9's cockpit is packed full of technology with a heads-up display (HUD), multipurpose colour displays (MPCDs) and an inertial navigation system (INS), all designed to aid the pilot on missions. Like the majority of fighter aircraft, many of the jet's features are controlled by a standard hands on throttle and stick (HOTAS) lever. Night-vision goggles come as standard and the aircraft also has a targeting pod that uses thermal imaging and a laser designator to identify hostiles on the ground when in difficult terrain or challenging weather conditions. The resulting image can even be ported via downlink to ground troops and vehicles to aid them on the same mission. Unlike in the UK, the US version of the GR9 is still up and running and future plans include installing a ground proximity warning system.

THE ORIGINAL HARRIER THE REVOLUTION THAT WAS THE HAWKER SIDDELEY P.1127

In the 1950s, the idea of a fixed-wing aircraft that could achieve vertical takeoff was being investigated by the superpowers. Early prototypes like the American Lockheed XFV-1 fell by the wayside until the first Harrier came around in 1957 and changed everything. Only an experimental plane itself, it nevertheless led the way for a new breed of aircraft. Despite having critics early on (it was originally ridiculed for being a subsonic aircraft in the supersonic age), the first Harrier impressed with its innovative VSTOL (vertical and/or short take-off and landing) capabilities that were a precursor for the popular future VTOL (vertical take-off and landing) system in later versions of the craft. The hovering was achieved by thrust vectoring through rotating engine exhaust nozzles aimed at a 90-degree angle. It was powered by a Rolls-Royce 101 turbofan engine and was labelled as a single-seat close-support and reconnaissance fighter.

The prototype evolved into the British Harrier GR MK1, which entered service on 1 April 1969. It was later exported to the USA and renamed the AV-8A as it replaced the F-4 Phantom. It has had a series of updates since and the fighter is commonly remembered for its achievements in the Falklands War, when it downed 20 Argentine jets on 1,190 sorties with no air-to-air losses of its own.



The AV-8S Harrier, one of the later developments that spawned from the iconic Hawker Siddeley P.1127

ROLLS-ROYCE PEGASUS ENGINE

The GR9 is powered by a Rolls-Royce Pegasus vectored-thrust turbofan engine. This model of the Harrier is fitted with a mk105 engine while the GR9A Harriers have the slightly upgraded mk107, which provides a huge 23,400lb of thrust. The mk107 is so powerful that in the rear fuselage section only metal able to withstand extremely high levels of fatigue can be used. The metal is usually a composite, which also helps with weight reduction to give the GR9 even more range. The materials used on this modern aircraft are a huge improvement on the aluminium alloy fuselage used on earlier models.

The Pegasus engine is specifically designed to allow for the Harrier's hovering capabilities. The secret is in rotating nozzles and airflow management



Our Senior Staff Writer Jack got a hands-on experience with the Harrier at Fleet Air Arm Museum



"THE MATERIALS USED ON THIS MODERN AIRCRAFT ARE A HUGE IMPROVEMENT ON THE ALUMINIUM ALLOY FUSELAGE"



The GR9 boasts an excellent aerodynamic design. The tailplane, for example, can be controlled to become more streamlined by hydraulic jacks

THE ROAD TO THE GR9

A CRASH COURSE ON THE OTHER MAJOR VARIANTS OF THE HARRIER II

GR5

The first model of the second-generation Harrier, the GR5 updated the avionics and armaments that were featured on the previous incarnation of the aircraft. An important step in the aircraft's evolution, a short-lived GR5A was also made before the next upgrade.



GR7

Next on the production line was the GR7, which had its maiden flight in May 1990. Now with night-time operational capabilities, the GR7 and GR7A had improved thrust and electrical systems and could carry a greater payload.



T10

Like many fighters, the second generation of the Harrier came with a training version. The T10 was based on the American trainer TAV-8B but, unlike its US equivalents, was combat ready.



“THE T10 WAS BASED ON THE AMERICAN TRAINER TAV-8B BUT, UNLIKE ITS US EQUIVALENTS, WAS COMBAT READY”



The design of the GR9 is based on lateral stability and ease of control



A destroyed tank sits amid the ruins of a mosque in Azaz





BRIEFING

Syrian Civil War

Can understanding 30 years of authoritarian rule, underlying ethno-religious tension and pragmatic international relations shed a light on where Syria is headed?

WORDS MARWAN KAMEL

In the blood-splattered ruins of Syrian cities, the world saw the beginning of the end of the Arab spring. Mass demonstrations gave way to mass killings and the Arab Spring turned into a winter. In Tunisia and Egypt, peaceful demonstrators overthrew their regimes without firing a single bullet, but what is so different about Syria that it splintered into a protracted, fragmented civil war? Though media coverage of current events in the war-torn country are sporadic and not entirely reliable, the roots of the conflict can still be unpacked to explain the reality of the present.

The immediate causes

In March 2011, in the small southern city of Dara'a, a group of children spray-painted anti-government slogans on the walls of their school. The words they painted were the same slogans that they had heard on TV reports from Egypt and Tunisia. "The people want the fall of the regime" and "Bashar out now!" was what they wrote, and although quite powerful statements, it was not the words themselves that sparked the Syrian Revolution. Instead, it was the regime's heavy-handed response.

The pre-teenage children were rounded up and tortured. They had been beaten, burned with cigarettes and had their fingernails torn out. Their bodies were returned to their families with a clear message: this is the price of revolt.

At first, the protesters' demands were extremely timid – the people had not lost fear of the regime. In Egypt and Tunisia, the army had either significantly supported the demonstrators or stood aside. Egyptians demanded the ousting of Mubarak. In Syria, however, citizens still feared the state and initially demanded only dignity, responsibility for the torture of the

children in Dara'a, employment – which was hovering above 50 per cent for youth – and cheaper housing.

President Assad's cousin, the governor of Dara'a, deployed the security forces to break up the funerals of the children and protests. But instead of putting down the revolt, the repression only pushed more people into the streets. In those critical first few days, plain-clothes gunmen opened fire on the protests. The regime insisted they were terrorists hoping to defame the government and provoke people into an Islamist revolt. Protesters fingered the loyalist Shabiha (ghost troop) militias.

On 25 April 2011, uniformed Syrian Army soldiers began the siege of Dara'a with tanks, artillery and small arms fire against unarmed demonstrators and those seeking refuge in the Al Omari mosque, footage of which ended up all over YouTube and social media. Those soldiers who refused to fire were themselves shot on the spot. The defecting soldiers who escaped were treated by civilians in Al Omari.

Even after the killings in Dara'a, the majority of the disorganised Syrian opposition still believed that non-violent revolution was possible. For the next year, demonstrations spread and became a hallmark of post-prayer Fridays across the country, but the regime continued to meet them with brutal crackdowns. The turning point was the Siege of Homs. In May 2011, the army surrounded the west-central area of the city, which was seen as a hotbed of the opposition. The majority Sunni neighbourhood of Baba Amr was particularly severely punished.

In July, with the siege ongoing, a group of military defectors led by Colonel Riad al-Assad formed the Free Syrian Army (FSA) to protect demonstrators. Up until Homs, the small FSA

THE ROAD TO CIVIL WAR IN SYRIA

1945

The Muslim Brotherhood is introduced into Syria by politician Dr Mustafa al-Siba'i.

17 April 1946

The last French troops leave Syria, granting the state independence. The country will be relatively politically unstable until the Ba'athist coup.

7 April 1947

The Ba'ath Party is founded by Michel Aflaq, Salah al-Din al-Bitar and followers of Zaki al-Arsuzi in Damascus.



28 Sept 1961

The Egyptian and Syrian union ends. It is the first step towards Ba'athists coming to power under the auspices of a reunion.

had avoided outright confrontation with the regime's army and relied on hit-and-run tactics. But as the siege raged, it became apparent that armed confrontation was inevitable.

After the FSA bombed the National Security headquarters, the regime turned ferocious, pounding the opposition with overwhelming artillery and air power, not only in Damascus but especially in Homs. The siege would continue for the next two years and end in a Stalingrad-like ghost town of concrete ruins. Soon tensions began to emerge between Islamist and secular factions in the opposition.

At the beginning of Bashar al-Assad's rule, however, it appeared that things could have been different. When he assumed power in 2000 after his father's death, Syrians were hopeful that the British-educated young heir would reform and modernise the country and retract the oppressive controls of the Cold War state.

For a short time, Syria blossomed under Bashar's rule. Around 2005, the president began a series of reforms that filled Syrians with hope. He ended a long-standing exit visa, allowed independent newspapers to pop up and even brought the internet to Syria. The Damascus Spring was born. Dialogue opened up in unprecedented ways in cafes all over the country and the voices of opposition began to grow about deciding the future of Syria. Despite this, the economy continued to stagnate for those far from power.

Soon the Ba'ath Party, fearing power was slipping away, started to round up dissidents. With this, Syria descended back into the bloody-minded status quo of authoritarian rule that marked the previous 30 years of Ba'athist policies.

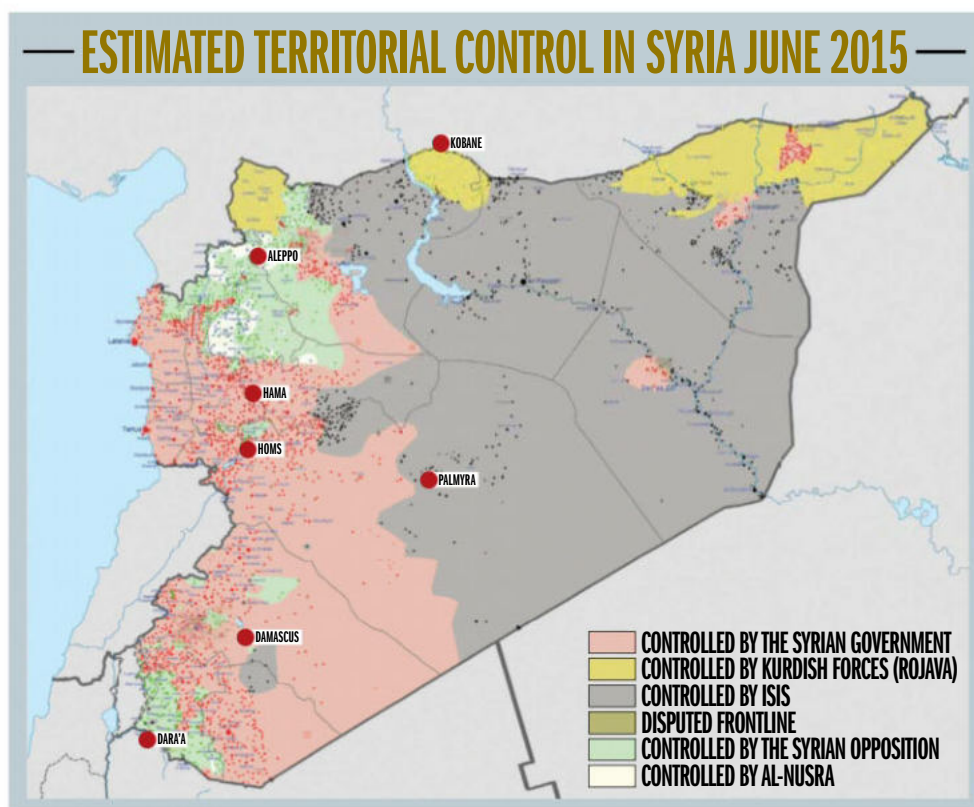
Rise of the party and its rule

Authoritarian rule in Syria was defined by one man: Hafez al-Assad. But his rise to power was a long and turbulent road that propelled a rightly founded paranoia towards military dictatorship and was edified in its army and state security apparatus. Members of the Alawi religious sect dominated nearly all the positions of power in pre-war Syria. This was so apparent to Syrians that it would be exploited by both regime propagandists and its extremist enemies seeking to de-stabilise the country's demographics. So, once the civil war's language started shifting towards apocalyptic Jihadism, regime propagandists began to present the war as an existential threat to the Alawis.

But how did 12 per cent of the population come to have such an overwhelming majority in power? The Alawi minority, a mystical sect of Shia Islam, was viewed by the majority of mainstream Sunnis as heretical. Prior to French rule, the religious group were largely poor peasants who lived somewhat isolated in the mountainous refuge to which they had fled following bouts of persecution.



Above: Syrian Army soldiers salute in Damascus



The omnipresent likeness of former president, Hafez al-Assad, father of current president Bashar al-Assad

8 March 1963

The Ba'ath Party seizes power in Syria and overthrows the government of Nazim al Kuds. Until 1970, a power struggle will ensue between the rival participants of the secretive Military Committee.

13 Nov 1970

A coup d'état known as the 'Corrective Movement' and led by Hafez al-Assad overthrows and arrests de facto president and Hafez's Ba'athist rival Salah Jadid.



16 June 1979

The Fighting Vanguard branch of the Muslim Brotherhood launches an attack on the Aleppo Artillery Academy. Cadets and officers are gunned down. This propels the Brotherhood into random terror attacks for the next few years.

26 June 1980

Hafez escapes an assassination attempt by the Muslim Brotherhood in the city of Damascus. Attackers throw two grenades at him, but they are smothered by one of his bodyguards.

27 June 1980

As a response to the assassination attempt on his brother, Rifaat al-Assad brings troops to Tadmor (Palmyra) Prison. There, his troops slaughter about 1,000 prisoners.



A home-made weapon known as a 'hell cannon' fires in Aleppo



“Members of the Alawi religious sect dominated nearly all the positions of power in pre-war Syria”

Crusader castle and World Heritage site Krak des Chevaliers is hit by a modern artillery shell

The French, after carving off Lebanon from Syria into a majority Christian state, also briefly created an independent Alawite homeland. The Alawis themselves were split between those favouring French rule and those who opposed it. Nonetheless, the French began to elevate many downtrodden peasants to positions of power within its colonial forces in a bid to buy loyalty – especially in terms of controlling the Sunni majority, as well as the anti-colonial movement that had begun to sweep the Houran and Damascus. As a result, many Alawis came to view the military as a convenient means of social mobility.

By the time of the union between Syria and Egypt under Egyptian president Nasser in 1958, a significant portion of the army was Alawite. When Nasser's union solidified, political parties were made illegal, including the fledgling Ba'ath party. Syrian military units commanded by officers who were loyal to the Ba'ath party, and considered too dangerous to remain in Syria, were stationed in Egypt. Here, a group of five officers, three of them Alawis, known as the Military Committee began to meet. When Nasser was overthrown by a coup in Syria in 1961, they began to plan their own rise to power.

Under the auspices of being pro-reunification with Egypt, they curried the favour of Nasserist officers who had been recently dismissed from their positions. In terms of popular support, the Ba'ath Party was almost nonexistent. So, in 1963, when the party overthrew the elected government of Nazim al-Kudsi, it desperately needed to buy favours. Although it did this, it also almost immediately began dismissing other members of the military it saw as disloyal.

If all this seems hard to keep track of, it's not without good reason. Hafez's meteoric ascendancy occurred during a period of prolonged political instability following independence from France. From 1946 until 1956, Syria went through multiple coup d'états including three in 1949 alone. In this ten-year period, despite Syria having brief periods of free and democratic elections, the military would inevitably always assert itself – although almost always without violence. During this period, there were more than 20 different cabinets and four separate constitutions. The Ba'athist coup in 1963, under the guise of the Corrective Movement and led by Hafez, promised the Syrian people stability.

A power struggle ensued between the five men who comprised the secret Military Committee as they attempted to outmanoeuvre one another for control. This resulted in two assassinations, one suicide and one prolonged imprisonment. The original founder of the Ba'ath Party, Michel Aflaq, was even exiled. Quietly, Hafez began promoting hand-selected officers behind the scenes. They mostly made sure to maintain a succession of Sunni figureheads.

2 February 1982

The Hama Massacre occurs and an Islamist insurrection is crushed. Members of the Brotherhood attempt to stage a coup d'état. The government responds by sending elite troops supported by thousands of tanks, artillery and air power. Hama is almost entirely destroyed and an estimated 25-40,000 people are killed.

10 June 2000

Hafez al-Assad dies of a heart attack after 30 years as leader and the Damascus Spring begins. The new government will allow independent press, internet access and a loosening of public discourse in Syria.

17 July 2000

Bashar al-Assad becomes president. Initially, Syrians see him as a reformer, but the changes are sadly short lived.



12 March 2004

The YPG (People's Protection Units) is formed in the wake of a football match between a Sunni Arab team and a Kurdish team from Al-Qamishli that sparks riots and violence.

30 April 2005

Syria withdraws from Lebanon, prompting Israel to launch a war against Hezbollah. As a result, Syrian involvement in Lebanon becomes more covert and its relationship with Hezbollah is increased.

Finally, in 1970, after the failed Black September operations in support of the Palestine Liberation Organisation in Jordan, pro-leftist Salah Jadid was arrested by Hafez's troops and he would stay in power for the next 30 years.

Hafez called his programme for stability 'National Reconciliation'. During this time he met with many rival political leaders, like those of the Communist Party as well as powerful leaders of all sects: Druze, Christian, Sunni, Ismaili and others. He promised them an integral role in the new state. Because he was always aware of his public image, he even had a prominent Shia cleric issue an edict that Alawis were indeed nothing more than an offshoot of the more publicly acceptable Shi'ism. From this carefully sculpted balance, the modern, secular, socialist Syria was born.

The country's first challenge came shortly after, in 1964. The Sunni Muslim Brotherhood exploited the divided sectarian to mobilise the disaffected, dissident stronghold of Hama into demonstrations calling for the repeal of the Emergency Law. The Brotherhood had been established in Syria by Mustafa al-Siba'i in 1945, albeit with a more socialist bent than its Egyptian counterpart. In 1964, instead of being brought into the discussion, they were met with a massacre of hundreds. Most importantly, the al Sultani Mosque was shelled with civilians still inside, including Marwan Hadid.

This man was radicalised by the traumatising experience inside the Sultani Mosque and became convinced that armed insurrection was the only means for seizing power. For these words, he would eventually be arrested and die in prison. Nonetheless, many heeded his call.

Throughout the 1970s, the Brotherhood embarked on an assassination campaign of Ba'athists, but more extreme elements even targeted people simply for being Alawis. Things came to a head with a 1979 attack on the Aleppo Artillery Academy and a grenade assassination attempt of Hafez, which was smothered by his bodyguard. Although the mainstream Brotherhood denied involvement, an offshoot of the more radical variant of their ideological progeny persisted.

After this, a crackdown began. Hafez, enraged by the attempt, sent his brother Rifaat and his special forces to the political Tadmor (Palmyra) Prison and massacred those held there.

But the Brotherhood didn't go away. In February 1982, a desperate wing of the group attempted to stage an uprising in Hama. Initially, a core of about 300 fighters achieved considerable success due to surprise. However, when the regime caught wind, they sent in Rifaat's elite troops, as well as overwhelming artillery and airpower. Any person in the street was considered a legitimate target and enemy combatant. After two weeks, the entire town was flattened and in ruins. According to the archives

Anti-riot police in central Damascus in 2012



A Free Syrian Army soldier in Aleppo



A man stands amid the wreckage of Aleppo after a barrel bomb attack



Tanks fire at Baba Amr, Homs

28 Jan 2011

Hasan Ali Akleh dies of self-immolation in protest against government policies in the city of Al-Hasakah, in Syria's largely Kurdish north east.

6 March 2011

Children in Dara'a are arrested in their classroom by security services and subsequently tortured for painting anti-regime slogans on walls. The arrests are met with large protests in Dara'a and then a crackdown on demonstrations.



15 March 2011

Activists call for a 'Day of Rage' across Syria to protest the events of the last month. This marks the beginning of the largest-scale public unrest that the Ba'ath regime has ever seen. Brutal suppression serves only to spread the demonstrations across the country and increase them in size.

6 May 2011

The Siege of Homs begins and marks the turning point of the revolution from non-violent street demonstrations into desperate civil war. Homs becomes one of the most-devastated cities as a result of the civil war.



of the former East German intelligence, up to 40,000 people were killed. It became one of the worst crimes of the modern Middle East.

Hafez blamed the attacks on a foreign conspiracy. Inside Syria, a 15-year purge began. People from the Brotherhood were rounded up and membership of the group became a capital offence in Syria. Realising his brother's extensive power over exclusively loyal troops, Hafez sent Rifaat into exile and had the units he commanded disbanded.

With this, Islamism was effectively driven underground and opponents were afraid of ever speaking out. As a result, a cult of personality began to develop. Within the context of martyrdom, Islamism became a legitimised political opposition that tempted those dispossessed under the surface of a tough secular state.

When the revolution turned to civil war by 2012, extremist groups like Al-Qaeda began to pour in from neighbouring Iraq. They capitalised on the instability to manipulate their way into small fundamentalist pseudo-states.

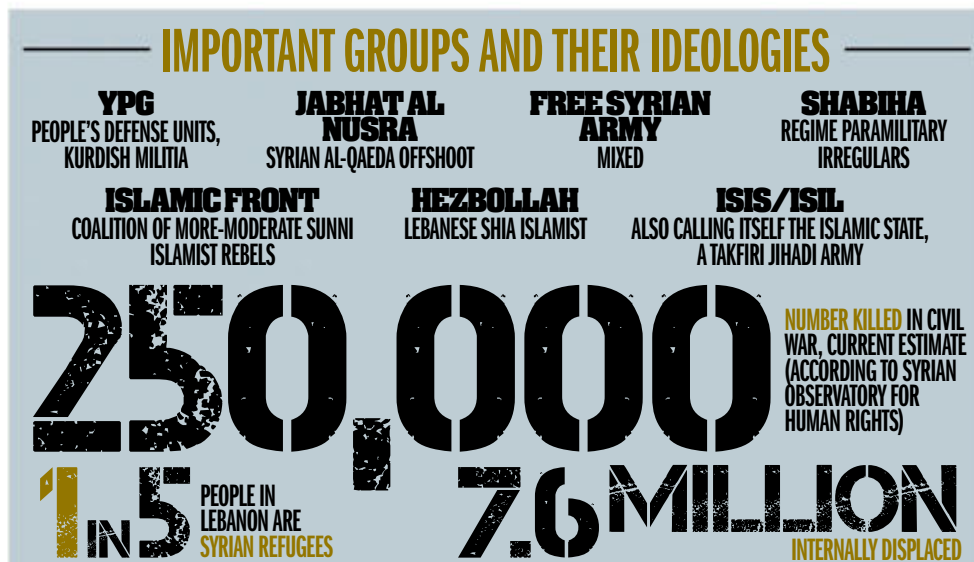
Regional instability and international relations

Syria's geographically strategic location near the Mediterranean, its alliance with Russia and Iran, as well as its position as the keystone in the Palestinian-Israeli conflict have complicated the international response. It holds the key to regional stability, especially in the case of Turkey's relationship with the Kurds. Essentially, the general approach by nations has resulted in prolonging the conflict but inadvertently forcing it to overflow.

For reasons of mutual enmity towards Israel, as well as Saddam Hussein's Iraq, Iran began to forge an alliance with Hafez's government. Despite their obvious ideological differences, this has been one of the longest standing in the Middle East.

When the uprisings in 2011 started, Iran began to advise Syria's PR. Not only this, but when the armed insurrection began, they started providing arms and advisors to Syrian troops. As the situation worsened, elite Iranian units themselves began to emerge on the battlefield at the most strategic places.

“Islamism was effectively driven underground and opponents were afraid of ever speaking out”



Another major shared foreign policy of both Syria and Iran is their support of the Lebanese group Hezbollah. Syria had started backing Hezbollah as a proxy during the occupation of south Lebanon by Israel. Invited by the Arab League in the late 1970s into an occupation that would last 30 years, ostensibly as peacekeepers, Syria and Hezbollah maintained a status quo in a fragile sectarian state. Within six months of Syria's withdrawal following the Rafiq Hariri assassination in 2005, Israel began bombing Hezbollah in Lebanon and followed up with ground troops. Syria and Iran started exponentially upping their aid to Hezbollah.

When Syria's own crisis began, Hezbollah staged pro-Assad demonstrations in Beirut. Later, Hezbollah troops would also become militarily instrumental. It was Hezbollah troops that led the assault on Homs and Qusayr to dislodge the FSA. When the Syrian army started experiencing mass defections and was low on manpower, Hezbollah – as well as its Iraqi Shia allies – provided the troops to fill in the gaps.

Likewise, the USSR and then Russia has been one of Syria's most outspoken allies. Initially, Syria turned to the Soviets to request assistance in the construction of public infrastructure projects during the 1960s.

Because the early Ba'athist state was somewhat hostile to Marxism, and preferring its own brand of socialism instead, the alliance seemed somewhat unlikely. Nonetheless, the interest rates offered to Syria by the USSR were lower than those offered by any other nation. In exchange, Syria also loosened its grip on its communist dissidents and integrated them into the government after a long period of simply jailing them. For the USSR, the alliance presented an opportunity to counter US influence in the region in the guise of Israel and later Jordan and Egypt.

While modern Russia continued to promote the view of Syria as under attack by a foreign conspiracy, Turkey was quick to jump in on the side of Hafez's opponents. In the 1970s, Turkey and Syria became entangled in a proxy war through the Kurds. When Turkey built its first set of dams on the Euphrates and effectively cut off a large supply of Syria's water downstream, Syria started to arm the Kurdish separatist group the Kurdistan Workers' Party (PKK) to retaliate. Turkey began to allow the Syrian opposition to congregate within its borders. It armed rebels through covert means, and later would act as the US's proxy in choosing vetted rebels eligible for aid. As Turkey took in thousands and thousands of refugees, it also built up its military border presence.

Saudi Arabia and Qatar have traditionally been among those states most interested in countering Iranian influence, and were also long-time opponents of the Syrian regime. They began to aid the opposition, albeit those who they had specifically chosen for what they saw as pious merit. This channelled an increasing amount of firepower towards groups that had alternate visions for a future Syria that had strayed far from the goal of the original demonstrators in Dara'a. As these third-party players, who were better equipped both in terms of firepower and ideology, overcame the disorganised Syrian rebels, they began to capitulate.

Added to this, Al-Qaeda fighters in Iraq, who had resisted the American occupation, began to pour in and overpower even these groups. With them, they brought not only experienced fighters, but also an extremely polarised and radical vision for an Islamic state. When they became cut off from Al-Qaeda for being too extreme, they formed ISIS. As they carved out a chunk of eastern Syria for themselves, the current map of the Syrian Civil War was drawn.

Rex Features

29 July 2011

A group of Syrian Army officers, led by Col Riad al-Asaad, defect and form the Free Syrian Army with the goal of protecting demonstrators. It will be later recognised by the Syrian National Council.

8 April 2013

ISIS claims its first territory in the Levant after spreading to Syria in the power vacuum of the civil war. Empowered by weapons captured during its time as Al-Qaeda in Iraq, it quickly captures large swathes of eastern Syria against poorly equipped rebels.

21 August 2013

A poison gas attack in Ghouta in Damascus finally brings the civil war to the attention of the international community. Russia blames rebels and blocks US attempts to get involved.

3 February 2014

Al-Qaeda severs ISIS from its organisation. The group's Jabhat al Nusra branch in Syria and ISIS have been clashing for some time and even declare two separate Islamist-radical states, of which ISIS comes out stronger.

22 Sept 2014

US-led coalition airstrikes begin inside Syria against ISIS and Jabhat al Nusra targets despite protests against intervention by the regime.



JAPAN 1937

A STATE OF WAR

WORDS
MIGUEL MIRANDA

Japanese soldiers fighting in a town in the province, near Nanking

Intoxicated by visions of imperial conquest, Japan's fanatical militarists launched a genocidal campaign to subdue China and plunder its resources

Only a peculiar madness could inspire the aspiration to carve up East Asia. For Japan's generals and statesmen, however, this was imperative to create a world empire, even when it was unfeasible.

How far within a hostile country could an army of occupation travel before it became bogged down? How many soldiers, bullets, tanks, ships and planes would it take? What about the untold millions to be checked by a permanent garrison? And what of the risk of sanctions, of Western interference? None of these quibbles seems to have shaken the Imperial Japanese Army's resolve as it set about fulfilling an ancient dream, but where this dream originated is hard to discern. What historians now refer to as the Second Sino-Japanese War is commonly overshadowed by the events after 1941. Not even its excesses and brutality caused too much alarm among the Great Powers – not until modern times, at least.

Dreams of an empire

There once was a dream among the fighting men of Japan, whose tireless martial vigour mired their nation in endless civil war. It was a dream of boundless empire acquired by merciless brute force. In the last decade of the 16th century, the warlord Toyotomi Hideyoshi launched two campaigns to conquer the Korean peninsula. Once a foothold on the Asian mainland was established, his legions of Samurai and musketmen would then march on Peking and subsequently rule China.

Both endeavours were spectacular failures and Hideyoshi died soon after his last debacle. Japan closed its doors and outlawed its guns. Christian missionaries were expelled throughout the realm. Then, after 250 years of domestic peace and isolation, an American naval squadron would force Japan to accept free trade – a rude awakening for the complacent Tokugawa shogunate. By 1889, Japan had adopted a new constitution, modelled after Prussia's, and became a constitutional monarchy.

A modern army soon followed. Six years later, the embers of Hideyoshi's far-fetched dream were alight once more. The First Sino-Japanese War was a raw display of Japanese tenacity and firepower in the face of superior Chinese numbers. Humbled, the diplomats of the Qing Dynasty agreed to a humiliating peace deal in the Japanese city of Shimonoseki.

Not only did China lose the Korean peninsula for good – granted 'independence' under Japanese supervision – but the island of Formosa as well. Worse, resource-rich Manchuria was now within Japan's grasp. The only hindrance was the Imperial Russian Navy's presence in the Kwantung peninsula, a state of affairs brought about at the last minute as Japan imposed its terms on China.

A decade later it was Russia's turn to be at the receiving end of Japan's army and navy. In a series of spectacular battles from Port Arthur to Tsushima, Japan's sheer fighting prowess during the Russo-Japanese War of 1904 to





1905 established its credentials as a Great Power. It had become an exemplar for every nation suffering under the yoke of colonialism and rapacious European dominance.

Japan's latest triumph against a larger adversary featured another chilling side effect. After the war, like the decrepit Qing Dynasty with its increasingly tenuous hold over China, the Russian Empire's own seams would begin to unravel in a torturous decline that climaxed with the 1917 Bolshevik Revolution.

Rather than bask in its new-found status as an ocean-going power, another problem faced the Japanese elite – a rigid alliance of landed families-turned-industrialists and the political status quo. The country had become too successful and was resource poor.

The gifts of the 20th century were too generous to the Empire of Japan. An archipelago of three main volcanic islands prone to earthquakes, with little arable land and no fossil fuel deposits, Japanese industriousness created a population boom that grew year on year. As an Asian power with a Prussian cast imposed by its constitution, a convivial and democratic outlook on national life never figured in political discourse.

Japan needed to be strong – if the world did not accommodate its needs, it would accommodate itself. The revolution that swept China in 1912 was a boon that allowed

further Japanese gains into its main rival's economy. By this time, Japan had mastered planning its economic foundations of coal, railroads and factories. Korea was its offshore base for cheap labour. This was not enough though; Japan needed to be stronger, even unassailable. An opportunity lay beyond Korea, across the Yalu River, in glorious Manchuria.

An industrial utopia

Manchuria was an exciting, rugged and unforgiving place. Until the 20th century Western travellers were only able to describe it in the most basic terms – its geography and the weather. The region's ill-defined borders were the Yalu River and the Yellow Sea to the south, to the east and north were the Usuri and Amur rivers, the natural boundaries separating it from Russia where the steppes merged with the tundra and taiga, and to the west was Mongolia's grasslands.

At the end of the First Sino-Japanese War, Manchuria was coveted by Russia as the last piece of its Siberian domain. With the blessing of France and Germany, Russia was able to position herself as China's defender, seizing Port Arthur and keeping Manchuria out of Japan's clutches.

In reality, Russia was just as eager to lay down railways and set up factories. Timber, minerals and vast tracts of arable land were

“JAPAN NEEDED TO BE STRONG – IF THE WORLD DID NOT ACCOMMODATE ITS NEEDS, IT WOULD ACCOMMODATE ITSELF”

for the taking. Harbin, China's northernmost city today, was founded by the Russians, who quickly turned it into a boomtown with its attendant recklessness and ostentation.

But Manchuria's forbidding mountains and steppes were home to the indomitable Jurchen tribes. During the 11th century these mounted nomads federated and subdued northern China long before Genghis Khan's hordes did the same. In the mid-17th century, their descendants repeated history. Organising themselves into an army, the Manchus toppled the Ming Dynasty and ruled China at its height as the Qings.

At the end of the Russo-Japanese War in 1905, Manchuria was ripe for the taking. Japan could not take it, however, since this would provoke another conflict. The stratagem that suited its designs best was a cunning one. If modernisation had a single impetus, it was the cycle of accumulating and investing capital, and the Imperial state had perfected modernisation.

THE BATTLE OF SHANGHAI

WHEN TWO MASSIVE ARMIES CLASHED OVER THE GREATEST CITY IN ASIA, THE CONTINENT WITNESSED CARNAGE ON A SCALE THAT HAD NEVER BEEN SEEN BEFORE

Eager to secure their control over Manchuria, Japan's militarist clique planned to invade the mainland and force Chiang Kai-shek from power. The first domino to fall would be Shanghai.

The problem was the only Japanese forces stationed in Shanghai were a detachment of naval infantry, and sending more would arouse suspicion. There needed to be a reason for the arrival

of Japanese troops. Taking their cue from the Mukden Incident and the outbreak of the Philippine-American War in 1899, it was decided that a single ambiguous crisis would launch the war.

After Chinese sentries allegedly gunned down a lone Japanese officer in Shanghai, one clash led to another and by 13 August, thousands of Chinese and Japanese troops were already fighting within the city.

Lasting for three months, from 13 August to 19 November, the battle would be the most savage fought in the pre-World War II era and included a daring amphibious assault by the Japanese on the mouth of the Yangtze River.

The Imperial Japanese Army (IJA) and Navy would use all of their assets to quash the National Revolutionary Army defenders, who fought heroically despite high casualties. These qualities made battles like the struggle for Sihang Warehouse the stuff of legend.

In typical fashion, the well-equipped but poorly led Chinese lost up to 250,000 soldiers defending Shanghai and only succeeded in slowing down the IJA, who razed the capital Nanking a month later.

“THE BATTLE WOULD BE THE MOST SAVAGE FOUGHT IN THE PRE-WORLD WAR II ERA”



Japanese soldiers in China in 1937

SUPPORT FOR CHINA

A CONFLICT BETWEEN TWO HEGEMONIC ASIAN GIANTS, THE WAR'S INTENSITY INSPIRED AN OUTPOURING OF PROPAGANDA



UNITED CHINA RELIEF ▲

Massive US aid to China did not begin until mid-1941, replacing the earlier generosity of the French, Germans and Soviets.

NAVY, ARMY, AIR FORCE ►

In this scene, Chiang Kai-shek looks on as his air force and navy arrive to thwart a Japanese armada.



EIGHTH ROUTE ARMY IN SHANXI ▼

By 1937, the Republic of China already had a vast and modern army for defending itself thanks to foreign aid.

“MASSIVE US AID TO CHINA DID NOT BEGIN UNTIL MID-1941, REPLACING THE EARLIER GENEROSITY OF THE FRENCH, GERMANS AND SOVIETS”



NRA ANTI-JAPANESE WAR POSTER

In this undated poster, a hulking NRA infantryman clutching a gleaming bayonet overwhelms his child-like Japanese rival cowering beneath him.



According to Louis Livingston Seaman, MD and veteran of the Spanish-American War and the Boxer Rebellion, Japan's arrival in mainland China bode well for the future. As explained in his book *From Tokio Through Manchuria*, published in 1905, the Japanese army and navy were models of efficiency.

Dr Seaman insisted their presence was needed to stop Russia. "It would indeed be a peril and terror to civilisation were these hardy peasants of Manchuria and the countless hordes of China transformed into minions of the White Czar," he wrote.

Nine years before World War I, long before the Treaty of Versailles and its limitations on the Imperial Japanese Navy's tonnage, Dr Seaman believed Japan acted as a regional balancer. He continued: "The main present hope of security against this lies in a complete victory of the patriots of the Land of the Rising Sun, which shall effectually stem the tide of Russian aggression for this generation at least, thus giving China one more chance to 'put her house in order'."

In the final chapter of *From Tokio Through Manchuria*, Dr Seaman was earnest in his best wishes for China, then the proverbial 'Sick Man of Asia'. "So long as England, Japan, and our own land (the United States) stand for the integrity of this great unwieldy empire, the machinations of her foes will assuredly be circumvented," he wrote.

Perhaps something that was beyond Dr Seaman's ability to foresee was just how sinister the Imperial Japanese Army's administration of Manchuria would become. In the ensuing decades, they turned it into a colony with its very own state-within-a-state, the Kwantung Army.

A less dramatic though insightful account of Manchuria's importance to Japan's progress comes from a book titled *The Economic History Of Manchuria*. Published in 1920, it was prepared by men from the Chosen Bank (pronounced choh-san), a financial institution based in Seoul, run by the Japanese.

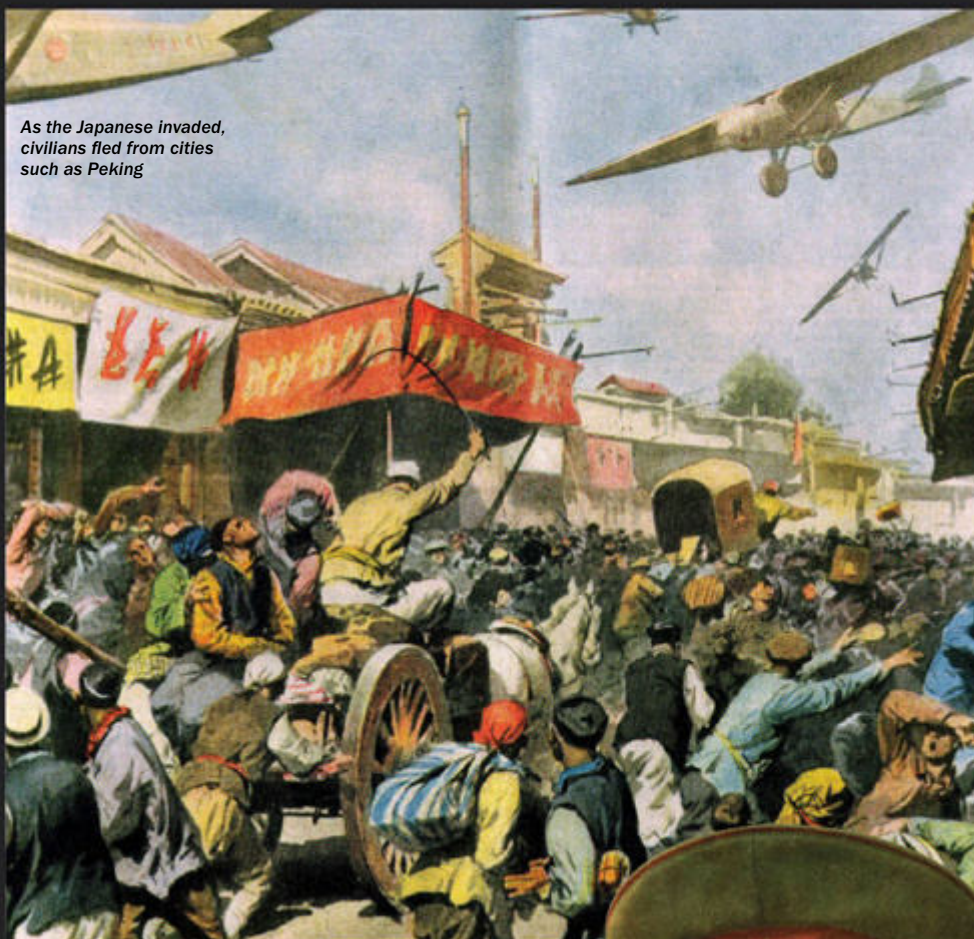
The book's author was very frank about Chosen's activities in Manchuria, where it had more branches than in the whole Korean Peninsula. This was necessary because "Manchuria had ever been a tempting field for the bank but then the trade of Chosen with the country was anything but such to justify its financial policy."

Founded in Seoul in 1909, a Japanese Imperial decree in 1917 made Chosen Bank the sole provider of Japanese bank notes in Manchuria. Of course, such a captive market needed to be kept; by force if necessary.

From colonials to conquerors

The Second Sino-Japanese War was actually just the bloodiest phase of a long struggle to capture the Chinese heartland. 30 years previously, the Empire of Japan already had its toehold in Manchuria.

In the following years its control of the region grew exponentially, so much so that this mutation of Japan's borders, which now spread across East Asia, created the dangerous strains that paved the way for its eventual defeat in World War II. One of these strains was the ambiguous existence of the Kwantung Army.



As the Japanese invaded, civilians fled from cities such as Peking

THE RISE OF HIDEKI TOJO

As war minister, Tojo earned the nickname 'the Razor' for his ability to make extremely quick decisions

TACITURN, SINGLE-MINDED AND A RUTHLESS EMPIRE BUILDER, TOJO WAS AN ORIENTAL SPARTAN AND THE UNWITTING ARCHITECT OF JAPAN'S HUMILIATION

When Hideki Tojo became prime minister of Japan in 1941, Asia was at the mercy of an unremarkable man. Born in Iwate Prefecture to an army sergeant and the daughter of a Buddhist priest, Hideki was the eldest of three sons and groomed for a military career from an early age. As a result, his world view was framed by his martial upbringing.

Five feet and four inches tall, with poor eyesight and a career that was mostly spent in staff positions, Tojo was a hard worker with simple tastes. Serving as military attaché to Germany during and after World War I left a deep impression on him and he was smitten by the idea of national industry subordinate to national will. These experiences led to his involvement with the One Evening Society and the Kodoha movement – each being secret militarist initiatives to prepare Japan for total war.

Other than leading the Kempeitai intelligence service in Manchukuo and orchestrating the invasion of Inner Mongolia in 1937, Tojo had little combat experience. As minister of war and then prime minister, he had absolute faith in Japan's destiny as a Great Power and believed any means necessary should justify this end, like the attack on Pearl Harbor. He was executed for war crimes on 23 December 1948.



Despite its ominous name, the Kwantung Army began as a small garrison tasked with protecting the Japanese-owned railroads that transported Manchurian produce to Korea. But as time went on, its size and role changed. With the benefit of hindsight and historical records, it appears the Kwantung Army's distance from Tokyo made its officers more autonomous, more daring, and reckless.

On 4 June 1928, Chinese warlord Zhang Zuolin was assassinated by a bomb in his railway car. This early attempt to subvert Manchuria was inconclusive, but three years later the Kwantung Army overran the area.

The following month, a bomb blast on the South Manchuria Railway led to further military action and the establishment of 'Manchukuo'. It was a daring endeavour to found an industrial colony in China's unforgiving frontier. The deposed Qing emperor Puyi was even rustled out of his post-Imperial life to serve as the nominal head of state.

What made these land grabs so frequent was China's weakness. The Republican Era that began with Sun Yat-sen's revolution in 1911 was a disappointment. By the 1920s the Kuomintang government only had nominal control of China and warlords ran fiefdoms that included whole provinces. So the Kwantung Army, with or without the approval of Tokyo's civilian leaders, took the initiative to expand its territory until it neared its deadliest rival: the Soviet Union.

All the years of subterfuge and belligerence in north-east China were minor acts in a grander drama. The Kwantung Army needed to be secure and impervious should the day come when the rival Red Army came crashing down the steppes, across the Amur River, and right into the intended breadbasket of Japan.

The two sides prepare

What is often missed when assessing Japan's national character before World War II is that the political and military leadership were often at odds. As the Kwantung Army and its officers went about the task of colonising Manchuria, the Imperial Japanese Army and Navy were making preparations for the next war.

Even when anachronistic concepts like 'Hakko ichiu', best described as a Japanese version of *Manifest Destiny* and *The White Man's Burden*, gained popularity in the 1930s, it took an unstable officer-class to intimidate and bully the government before Japan could fulfil its imperial goals.

The same year the Kwantung Army overran Manchuria on a flimsy pretext, a pseudo-putsch took place in Tokyo. From 1932 to 1936, there was a campaign by the military, the police and the Kempeitai to snuff out communists,

"THE MYSTERIOUS 'KODOHA' BELIEVED THE FIRST STEP TOWARDS REALISING AN UNASSAILABLE JAPANESE EMPIRE WAS SEIZING POWER BY WHATEVER MEANS. IN 1936, THE KODOHA'S CLOUT MEANT THAT THE IMPERIAL JAPANESE ARMY AND NAVY WERE READIED FOR THE GREATEST WAR IN ASIAN HISTORY"

CHINA'S RESISTANCE

DOOMED BY ITS OWN INCOMPETENCE, THE KUOMINTANG MILITARY COMPENSATED WITH SHEER NUMBERS EQUIPPED WITH A VAST SELECTION OF EUROPEAN ARMS

TRAINING

By 1928, Chiang Kai-shek had unified the crumbling Chinese state with the massive National Revolutionary Army at his disposal. Millions strong, an elite corps of 300,000 officers and soldiers trained by German advisors were ready for a showdown with Japan by 1937.

STRUCTURE

This depended wholly on foreign advisors. Some units were staffed and run like their European counterparts, others were mired in anarchy. Other units didn't exist at all except on paper and in press releases. Sporadic warlord armies were quite cohesive, but small.

EQUIPMENT

Between poor administration and a modest industrial base, it was only possible to equip the army with locally made small arms. Planes, tanks, ships and artillery were imported from abroad. This over-reliance on foreign aid meant the army did not have a capacity to replace its losses.



Chinese soldiers armed with ZB-26 guns

EFFECTIVENESS

The most effective divisions of the Chinese army perished during the Second Battle for Shanghai in 1937. Others became bogged down suppressing the communists in the interior provinces.

If the Chinese had one advantage, it was sheer manpower. The record of the Republic of China's armed forces is an ignominious one. Though successful in almost quashing the nascent communists, it was completely ineffective against the IJA. Even when Chinese generals were often very competent, their loyalties and motivations were highly questionable.



Above: The National Revolutionary Army had its own small armoured corps using the French Renault FT-17 light tank

subversive elements and politicians who disagreed with the ideals of Hakko ichiu.

It was apparent a campaign was being waged by a deep state. It had no membership list or manifesto, but it had a name. The mysterious 'Kodoha' believed the first step towards realising an unassailable Japanese empire was seizing power by whatever means. In 1936, the Kodoha's clout meant that the Imperial Japanese Army and Navy (IJA) were readied for the greatest war in Asian history.

Preparations for this momentous struggle had been under way for years. When the

US War Department commissioned studies on Japan's military, the results revealed an efficient fighting machine with a vast arsenal. The IJA's Air Service had thousands of trained pilots and aircraft. The navy was the best in the Eastern hemisphere.

The Japanese infantryman, airman and sailor were formed in the same mould. No matter the branch, training was exacting, harsh and literally painful. The Japanese soldier was often portrayed as a yellow-skinned and bow-legged malefactor – in reality, he was a young man who was punished, beaten and humiliated by his superiors on a regular basis.

But he had an excellent rifle in the 6.5mm Model 38, which was later replaced by the more powerful 8mm Model 94, colloquially known as the 'Arisaka'. Japanese infantrymen also had a quaint muzzle-loaded 50mm grenade discharger for intermediate ranges as well as a semi-automatic 20mm anti-tank rifle. A lethal variety of machine guns and mortars were available to IJA companies, as well as light tanks and towed artillery. Simply put, Japan's military was ready for its next war.

*The city of Wuxi, near
Shanghai, burns as
Japanese soldiers move on*



**"THERE ARE NO EXACT FIGURES OF CIVILIAN DEATHS IN NANKING,
OR EVEN DEATHS FROM THE SURROUNDING COUNTRYSIDE - THE
JAPANESE BURNED EVERY VILLAGE IN THE CAPITAL'S OUTSKIRTS"**





Above: During the Battle of Shanghai, Japanese soldiers fire through holes in a brick wall
Left: Japanese soldiers cross the moat to enter the Gate of China, Nanking's southerly city wall
Below: A baby sits among the ruins of Shanghai



By comparison, in 1937 the Kuomintang's National Revolutionary Army (NRA) was in questionable shape. Ever since Chiang Kai-shek assumed power in 1928 he had gone about setting China's house in order. At first he almost got rid of the communists under Mao Tse-tung, then he subdued the provincial warlords to assert the Kuomintang's authority.

Both efforts were a success, encouraging the European powers to make resources available for the NRA's modernisation. Western advisors had an important role in moulding the NRA into a professional military that ranked among the world's largest. Most prominent were an unspecified number of Germans, including Colonel General Hans von Seeckt, who fought the Russians in World War I's Eastern Front.

Von Seeckt and a succession of officers gave Chiang Kai-shek a well-trained and highly motivated corps of 300,000 men by 1936. Added to this were between 900,000 to one million auxiliaries. Thanks to foreign aid, the NRA had access to a modern, albeit limited, arsenal. Small arms like the 7.92mm Mauser 98K and the 8.5mm ZB-26 machine gun gave the NRA infantry top-of-the-line firepower.

Limited amounts of modern artillery and light tanks – French Renault FT-17s and Soviet T-26s

– also reached the NRA. On the eve of war with Japan, the NRA was laying the groundwork for what would become the Republic of China Air Force. This time it was the Soviet Union that provided the hardware to the Chinese, approximately 500 propeller-driven light fighter aircraft and more than 300 bombers. The navy, on the other hand, possessed modern gunboats and cruisers.

A stumble into hell

As it turned out, it took a bizarre string of events to set the NRA and the IJA against each other. Two incidents, one in Shanghai and the other in the former Imperial capital Beijing, would spiral out of control and start an epic battle involving millions.

In July 1937, units of the Kwantung Army seized Beijing's historic Marco Polo Bridge and in August a Japanese navy officer was killed by Chinese sentries in Shanghai. There continues to be speculation that NRA General Zhang Zhizhong orchestrated the incident to provoke a war at the behest of Stalin. Apparently, Zhang was a high-level Soviet agent.

The resulting three-month battle for Shanghai, from August 13 to November 19, was a futile one. In the span of 100 days, the NRA was almost eliminated but the IJA had received a rude awakening. The Chinese could put up a tremendous fight and rising Japanese casualties posed a threat to any invading force's momentum.

The Kuomintang and its military had the worst of it, however. The IJA might have been slowed in the city fighting, but the NRA's losses were in the hundreds of thousands. Gone were

its best officers, half of the air corps, and most of its tanks and artillery. Meanwhile, the Kwantung Army in the north had seized Beijing and Inner Mongolia.

Chiang Kai-shek's options were all poor. With the national armed forces in disarray and the IJA on the march, on 1 December the Kuomintang abandoned its capital Nanjing, known to Europeans as 'Nanking', and relocated to Chongqing. The NRA general left behind to defend Nanking, Tang Shengzhi, had the manpower at his disposal but not the will or strategy to block the oncoming IJA. Nanking fell and its inhabitants were at the mercy of the IJA. What followed was a grim and baffling period that still echoes down the years to haunt Japan.

The rape of Nanking

From 13 December until the end of January the following year, foreign missionaries and members of the diplomatic community witnessed wanton arson and looting by Japanese soldiers in Nanking. A week before, the retreating Kuomintang tried to destroy any structure of value, lest these be captured by the IJA. Now, entire neighbourhoods were razed and civilians rounded up.

Soon the killing began. What has astounded historians since is that the atrocities perpetrated in Nanking had no precedent and seemed to have little purpose other than to inflict cruelty on its citizens. The earliest testimonies on Nanking during the first two months of Japanese occupation come from two unlikely American conspirators, Reverend John Magee and George Fitch, the head of the local YMCA. Together they smuggled 16mm footage

**"IT WAS CALLED 'SEISEN'
AND IN ITS NAME HELL
WAS BROUGHT TO
MILLIONS OF INNOCENTS"**

out of China. The footage captured Japanese atrocities in and around the International Safety Zone, where the foreigners vainly tried to save as many as they could.

It was brave but futile. Constantly harassed by the Japanese, Fitch and a small group of foreigners, including the heroic German ambassador John Rabe, bore witness to the IJA's revenge on Nanking. Fitch kept a journal of his experiences. Just four days after the IJA stormed the city, mass rapes were routinely perpetrated. "Over a hundred women that we knew of were taken away by soldiers," Fitch wrote. "Refugees were searched for money and anything they had on them was taken away, often to their last bit of bedding... It was a day of unspeakable horror..."

In 1937, a new concept began to circulate in Japanese newspapers and radio broadcasts. It was an attitude, a national mindset, which would justify a long war with an unyielding enemy. It was called 'Seisen' and in its name hell was brought to millions of innocents. But just what did the IJA accomplish in Nanking?

There was no strategy to the slaughter. Men young and old were rounded up on the assumption they were Chinese soldiers in disguise and either shot to death, machine gunned, or bayoneted. Accounts of mass immolation also trickled out from survivors.

Fitch recalls the story of a Chinese man he tried to save. "He was one of a gang of some hundred who had been tied together, then gasoline was thrown over them and set fire." Women were fair game. Japanese soldiers

would break into homes, steal anything of value they could find, and then take turns raping them. Sometimes the women were killed, sometimes not. Eight days before Christmas Eve 1937, Fitch wrote: "A rough estimate at least would be a thousand women raped last night and during the day."

"One poor woman was raped 37 times," he added. "Another had her five-month-old infant deliberately smothered by the brute to stop its crying while he raped her." On 27 December, he wrote: "A car with an officer and two soldiers came to the university last night, raped three women in the premises and took away one with them." On 30 December there were "three cases of girls 12 or 13 years old either raped or abducted." Finally, on 11 January, Fitch's diary notes: "I have written this account in no spirit of vindictiveness. War is brutalising..."

There are no exact figures of civilian deaths in Nanking, or even deaths from the surrounding countryside – the Japanese burned every village in the capital's outskirts. The numbers that have endured are largely estimated statistics. Allowing for a bare minimum of 50,000 civilians killed would mean that the IJA murdered at least 1,200 men and women every day for six weeks. However, the number could easily be as large as 300,000, meaning the rate of murders by bayoneting, beatings, execution and decapitation takes on an unimaginable horror. What cannot be denied or cast in doubt was the scale of Japanese brutality. Aside from the 16mm film that Fitch smuggled in his overcoat to Shanghai and then to the US with the help of Magee, photographs survive of mutilated corpses, pyramids of severed heads, of women stripped bare and taken for trophies.

The IJA also looted Nanking, but the value of this wealth has been forgotten by history. In the face of this carnage, the mistaken bombing of the gunboat USS Panay that killed two Americans and an Italian journalist is understandably a footnote. For this incident the Japanese government apologised and paid reparations.

The end of the beginning

After the atrocities at Nanking, the war raged on, with China's generals always miscalculating and bungling their operations despite foreign aid and expertise. In August 1939, the IJA embarked on its last northern adventure. The goal was the same as before, to expand the boundaries of Manchukuo. But the consequences were dire.

In a place the Soviets called Khalkhin Gol, whole IJA divisions were encircled and wiped out by a methodical combined arms operation that was led by a certain former cavalryman named Georgy Zhukov. The Japanese soldiers, tough as they were, found themselves outfought.

Simply put, the Soviets had better artillery, more tanks, and a lethal new doctrine that annihilated infantry formations. After the battles of Khalkhin Gol, also known as Nomonhan, the IJA had no stomach to fight the Soviets. Manchukuo and the Kwantung Army's fate was sealed on 9 August 1945 when two great pincers of the Red Army crushed the last hope of Imperial Japan.

However, 1937 remains the year when the curtains were first drawn wide open and the stage of the last century's most catastrophic period was set. What followed was a conflagration none of the belligerents could possibly have imagined.

Soviet forces at Khalkhin Gol



"THERE WAS NO STRATEGY TO THE SLAUGHTER. MEN YOUNG AND OLD WERE ROUNDED UP"

Bodies of victims stack up on the bank of the Qinhuai river, near Nanking's west gate



BOOK REVIEWS

History of War's pick of the newest military history titles waiting for you on the shelves

THE BATTLE OF WATERLOO EXPERIENCE

Writers Peter & Dan Snow **Price** £30 **Publisher** Andre Deutsch

CELEBRATE THE 200TH ANNIVERSARY OF WATERLOO WITH ONE OF THE BEST ALL-ROUND BOOKS EVER MADE ON THE BATTLE

The Battle Of Waterloo Experience is written by TV historians and father and son team Peter and Dan Snow, and covers every base in its mission to be the book on Waterloo.

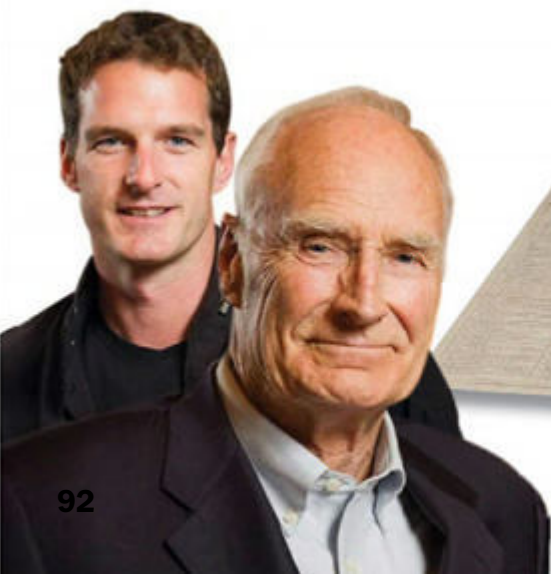
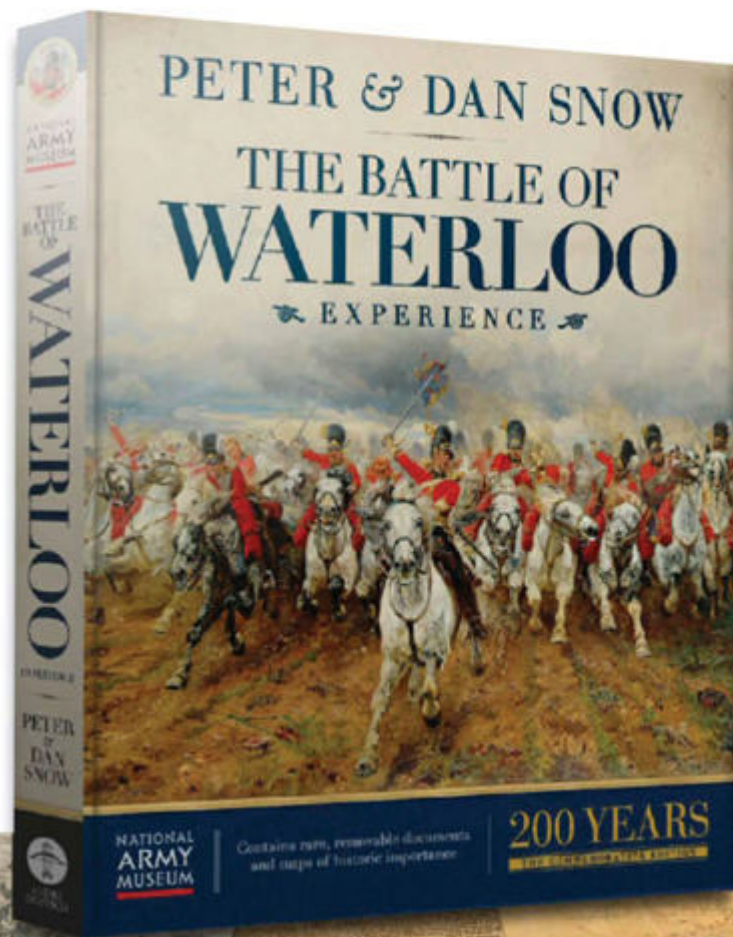
It may only be 60 pages in length, but each double-page spread is packed full of vivid descriptions and revealing illustrations. Many of the paintings are superb action scenes that thrust the reader into the heart of the battle as Hougomont and La Haye Sainte come to life, and it makes you want to watch *Sharpe's Waterloo* all over again. As an added bonus, there are 20 removable historic documents that are previously unpublished. The battle maps in particular outline exactly what happened in each stage of the conflict and do a superb job of educating those that may not be too familiar with the Waterloo battlefield.

The book is further boosted by its partnership with the National Army Museum, who supplied photographs of swords, rifles and medals from their extensive collection. The Snows' expertise is sprinkled throughout as the pros and cons of each of the leaders are analysed and there are even gems of little-known facts. For instance, did you know that Waterloo became a tourist site almost immediately after the battle?

The Battle Of Waterloo Experience is written in a chronological order and includes detailed background to the conflict from Napoleon's Hundred Days to his exile on St Helena. Historians and long-time students of Napoleon may not find much new here, but as an

introduction for the casual reader, it is unparalleled. Overall, this is an exceptional release and the Snows' words linked with outstanding imagery is a masterclass in history book making. The 200th anniversary couldn't have been commemorated any better.

“Historians and long-time students of Napoleon may not find much new here, but as an introduction for the casual reader, this work is unparalleled”



NAPOLEON ON WAR

Writer Bruno Colson **Price** £27.99 **Publisher** Oxford University Press

THE BOOK ON WARFARE NAPOLEON WOULD HAVE WRITTEN HIMSELF, HAD HE THE TIME

According to the author of this scholarly work, Napoleon Bonaparte was “the greatest warrior of all time.” It is a bold claim to make, especially when you compare his achievements to those of, say, Genghis Khan or Suleiman the Magnificent.

That the vertically challenged Corsican managed to create himself an empire spreading from the Spanish plains to the Russian Steppes is irrefutable. Whether the methods he used to conquer that area (before losing it all again in a devastating defeat) mark him out as history’s finest military leader is less certain.

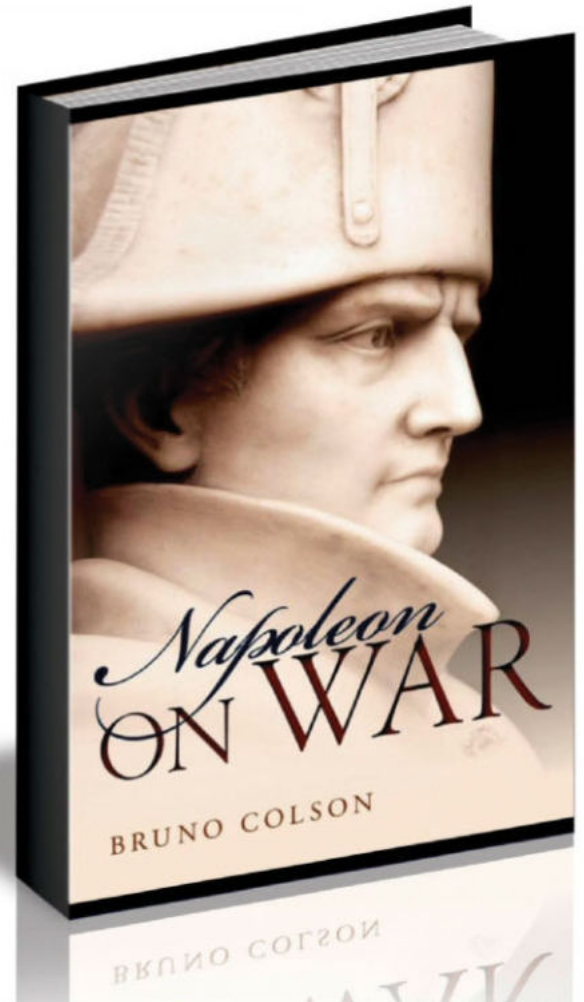
Once you get over the whiff of hagiography that hovers over this book, what you’re left with is a fascinating academic experiment. Colson’s aim seems to have been to finish a job that Napoleon himself started but abandoned. That is to say, write an authoritative work about conflict as he saw it. His version of Sun Tzu’s *The Art Of War*, if you will.

For this title, Colson actually takes a similar work by one of Napoleon’s great rivals, the Prussian general Carl von Clausewitz, and uses it as his blueprint. Directly borrowing the structure and headings from von Clausewitz’s famous book *On War*, Colson inserts Napoleon’s own writings on the nature, theory and strategy of warfare.

The result isn’t so much a narrative of Napoleon’s life as a guide to empire building, Bonaparte style. Philosophically this means that monarchies cannot co-exist with republics. Tactically this means defeating your enemy simply and swiftly, through the efficient use of artillery. Ideologically this means having troops who’d die for the cause – an attribute Napoleon intriguingly calls ‘moral strength’.

Napoleon On War was written to be an epic in its field. It is not, but it is very close to being definitive on its subject – a superbly researched work of reference.

“The result isn’t so much a narrative of Napoleon’s life as a guide to empire building, Bonaparte style”



Napoleon depicted at the Battle of the Pyramids

ALL ABOUT HISTORY RECOMMENDED READING

THE SAGE OF WATERLOO (WW NORTON)

Ever wondered what the Battle of Waterloo would be like if narrated from the point of view of a rabbit living at Hougoumont? Well, wonder no longer.



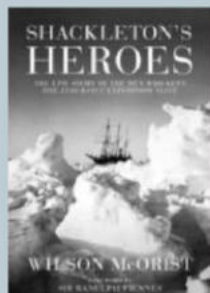
PABLO (SELFMADEHERO)

No, unfortunately not the infamous Colombian drug lord. This illustrated graphic novel documents the life of artist Pablo Picasso, as told through the eyes of his lover, Fernande Olivier.



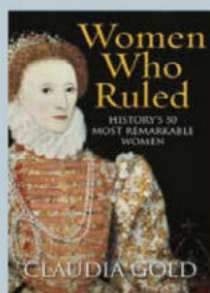
SHACKLETON'S HEROES (THE ROBSON PRESS)

The one and only Sir Ranulph Fiennes provides sufficient authority to this already worthy look at the Endurance expedition to the South Pole.



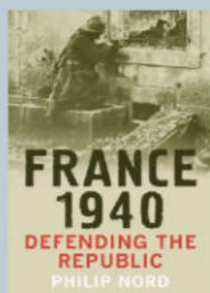
WOMEN WHO RULED (QUERCUS BOOKS)

From Elizabeth I to Benazir Bhutto, this book attempts to shed new light on the female leaders that have been overlooked by the history books.



FRANCE 1940 (YALE UNIVERSITY PRESS)

Tackling the ever-controversial subject of France's role in WWII, this serves as a post-mortem of the French military failure against the Nazis.



THE SCUM OF THE EARTH

Writer Colin Brown Price £20 Publisher Spellmount

THE STORIES OF THE BRITISH HEROES WHO RETURNED FROM BATTLE TO AN UNGRATEFUL NATION

When the soldiers came home from Waterloo they found a land not fit for heroes, but one blighted by poverty and inequality. As modern as that scenario may sound, it is actually the backdrop to this excellent book about the Battle of Waterloo that took place 200 years ago.

The title is taken from Wellington's notorious description of his own troops. The heroic men who gave him victory and immortality were for Wellington something of a lower species. Not an uncommon view at the time, and when he moved on from leading an army to leading the country, this loathing of the lower classes would lead Britain to the brink of revolution.

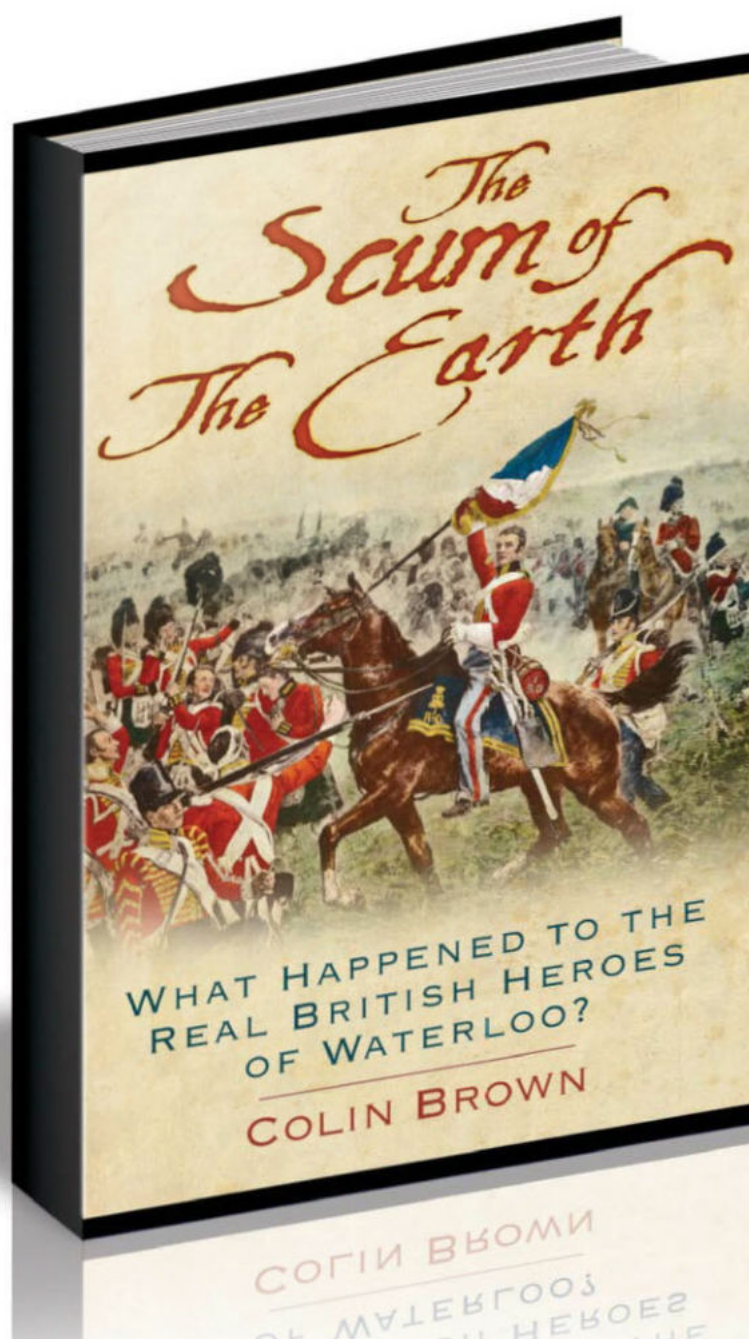
The era that followed Waterloo was one of Britain's most turbulent. Industrialisation had spawned a new urban working class that was beginning to demand a say in how the country was run. The old elite led by Wellington's government, however, was in no mood to share either power or prosperity, and some

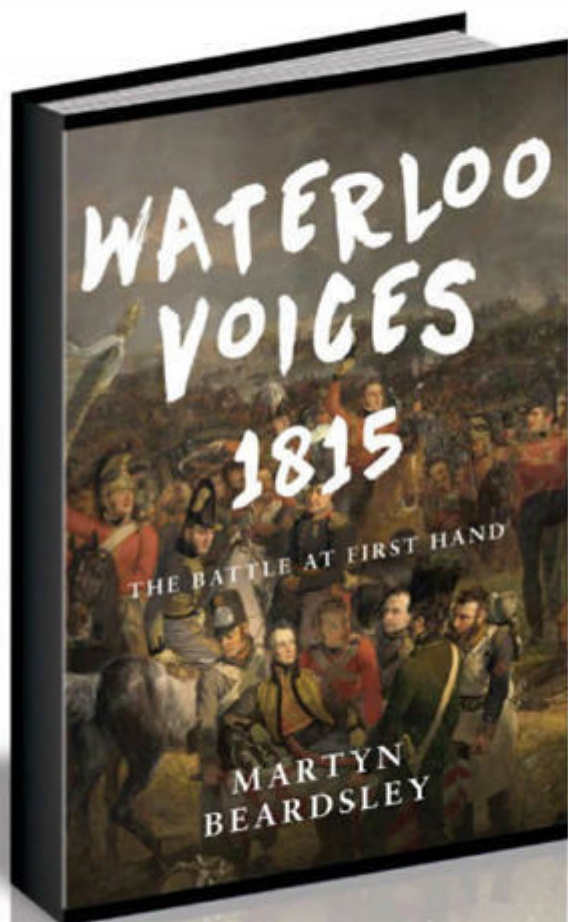
of those who'd fought for the Iron Duke would now find themselves trampled by him.

Through a series of case studies, Brown brings back to life some of the ordinary soldiers who served under Wellington. Men who have all but been expunged from history, but whose courage helped foster a century of European peace and allowed Britain's empire to flourish.

Men who, as this book consistently demonstrates, weren't just let down by the country they'd help bring such wealth and glory to, but actively punished by it. Veterans of the battle like John Lees who, four years after the victory, died as a result of the horrific beating he took from troops at the Peterloo Massacre while demonstrating for democratic reform.

Subtitled *What Happened To The Real British Heroes Of Waterloo?*, this is a moving and timely contribution to our understanding of that epochal battle and its aftermath.





WATERLOO VOICES 1815

Writer Martyn Beardsley **Price** £20 **Publisher** Amberley

IN THEIR OWN WORDS, WHAT HAPPENED ON THE DAY FROM THE PEOPLE WHO WERE THERE

One of the most poignant epithets in military history belongs to Wellington. “Believe me,” he wrote after his famous victory at Waterloo in 1815, “nothing except a battle lost can be half so melancholy as a battle won.”

The final defeat of Napoleon would bring Wellington the enduring adoration of Europe and ensured his name would chime on through the ages. But what of the ordinary folk who fought that day or witnessed the build up to the terrible carnage? What did they make of it all?

In *Waterloo Voices 1815*, Martyn Beardsley brings together a surprisingly diverse choir of voices, ranging from a high-ranking Spanish officer who'd also been at the Battle of Trafalgar ten years earlier to a female travel writer. In between we get a couple of princes, the wife of a soldier who'd followed her husband to war (not an uncommon practice), soldiers from all over the British Isles of all

ranks, as well as Wellington and Napoleon themselves. Their collected opinions and observations are all garnered from letters, diaries and eyewitness accounts published, in some cases, many years after the event.

While clearly a great deal of effort has been made to ensure that the cast is made up of a broad range of characters, the emphasis is very much on the British view of the battlefield. And despite the author's best efforts, there is still a slight skew towards the officer class. Given the times, this is perhaps inevitable.

The practice of formally recording ordinary people's experiences of historical events was still well over 100 years away, and many of the men in the lower ranks would doubtless have been illiterate. Not that this particularly distracts from what is a genuinely compelling narrative that puts you right among the musket smoke and cannonballs.

“A genuinely compelling narrative that puts you right among the musket smoke and cannonballs”

WATERLOO IN 100 OBJECTS

THE STORY OF EUROPE'S CLIMACTIC CLASH TOLD THROUGH 100 STUNNING ARTEFACTS

Writer Gareth Glover **Price** £25 **Publisher** The History Press

Though some of the entries in Glover's list can hardly be called ‘objects’ in any strict sense of the term (several of the famous farmhouses central to the battle are included), their place in the list doesn't feel incongruous thanks to the care that has been taken in the accompanying commentary.

Like a selective but creative curator, the author has clearly taken pains to pick objects that give as wide a view of the battle as possible. From the hat belonging to the redoubtable Thomas Picton to the trousers and even the false leg of Henry Paget, Earl of Uxbridge, every turn of the page presents the possibility of discovering a treasure.

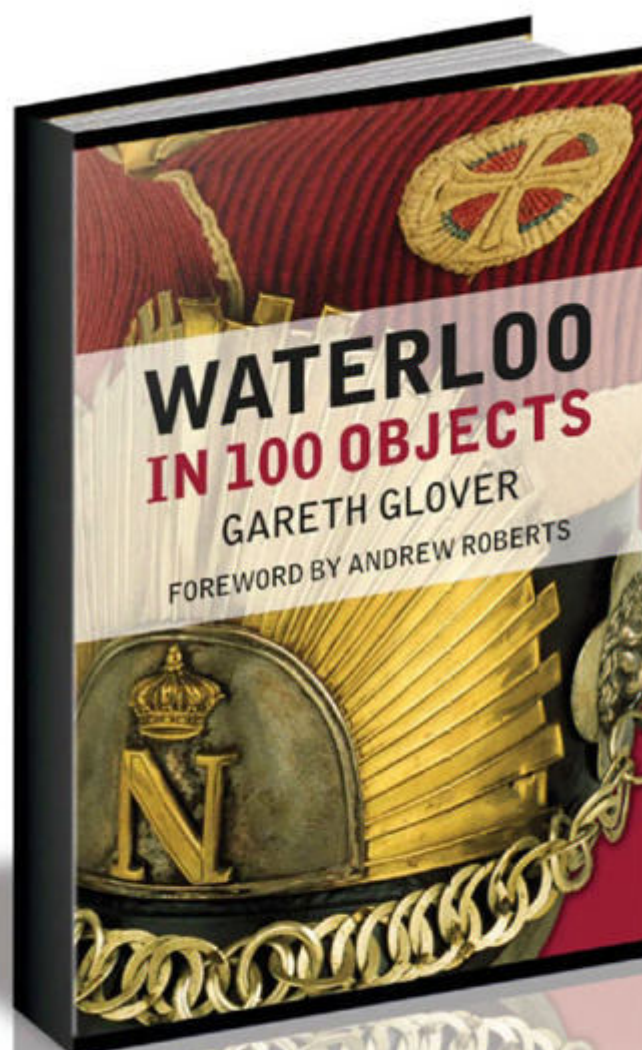
Though there is plenty of detail here to accommodate a novice of the battle, those well versed in Waterloo won't be left wanting by any means. Between the mausoleums, statues and photographs

of the facades of Belgian museums, there is a wealth of delicate artefacts to glut the appetite of even the most obsessive student of the battle.

For example, there is a detailed photo of a livret, a pocketbook belonging to a member of Napoleon's Grande Armée, which was recovered from the battlefield. Louis Monsigny, “a farmer from Boulogne,” Glover writes, “joined the 43rd Régiment de Line in 1814.” Though the 43rd Régiment did not take part in the battle, entries such as this really place a sober light on the story, bringing to mind the lives of the real people who fought and died on either side.

This book, therefore, shows a lot more to the reader than just a collection of objects. It is a record of the people behind them, towards who, thanks to these incredible artefacts, we can feel that bit closer.

“The author has clearly taken pains to pick objects that give as wide a view of the battle as possible”



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WAR IN NUMBERS

BATTLE OF WATERLOO

With much of the army still overseas, Wellington's forces were pieced together from whatever Britain and her allies could muster

20-40%

▲ Of Wellington's infantry were Irish

120

▲ The maximum amount of French casualties caused by Wellington's artillerymen per hour at Waterloo. This made up 33 per cent of the overall casualties

33%

▲ Of British troops were older than 30. Half were between 18 and 29 while 17 per cent were younger

15

Was the age of the youngest British infantryman on the eve of the battle, while the oldest was 45

4 x 2.17 miles

▲ The relatively small size of the battlefield, on which 47,000 men died

1.78m

(5ft 10 inches):

Only three per cent of British infantrymen were this height or taller

478

Fatalities suffered by the 27th Inniskilling Fusiliers, out of a total of 750 men ▶





THE ART OF BATTLE

EXHIBITION

22 May – 23 August

A new exhibition of arts and armour to mark the 200th anniversary of one of Europe's most significant events - the Battle of Waterloo.

Featuring the rarely exhibited monumental 'cartoon' by Daniel Maclise, on loan from the Royal Academy of Arts and the magnificent painting 'Scotland Forever!' by Lady Elizabeth Butler from Leeds City Art Gallery, as well as the newly conserved Siborne model of the battlefield in miniature.

Stunning works of art displayed for the first time alongside objects associated with the battle which tell the story of the events of 18 June 1815.

FREE ADMISSION

#Waterloo1815

Daniel Maclise RA (1806-70), Detail from the cartoon for 'The Meeting of Wellington and Blücher' © Royal Academy of Arts, London; Photographer: Prudence Cuming Associates Limited

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